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PRELIMINARY ASSESSMENT REPORT

WARD McCARTY
LIBERTY, TEXAS

EPA CERCLA I.D. NO.: TXD982549446

Prepared for:

The United States Environmental Protection Agency
Region VI
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Contract No.: 68-W9-0015
Work Assignment No.: 22-6JZZ
Document Control No.: 4603-22-0081

Submitted by:

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4 June 1993

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SIGNATURE PAGE

Stacey Bennett, Work Assignment Manager Hazardous Waste Section U.S. Environmental Protection Agency, Region VI	Date
for John D. DiFilippo, P.E. Roy F. Weston, Inc. Zone Program Manager	6/4/93 Date
Robert B. Beck, P.E. Roy F. Weston, Inc. Site Manager	6/4/93 Date
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Jeff S. Wormser Roy F. Weston, Inc. Project Team Leader	6/4/93 Date

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TABLE OF CONTENTS

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TABLE OF CONTENTS
(continued)

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TABLE OF CONTENTS
(continued)

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LIST OF FIGURES

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LIST OF TABLES

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SECTION 1
INTRODUCTION

Under the authority of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980 and the 1986 Superfund Amendments and Reauthorization Act (SARA), Roy F. Weston, Inc. (WESTON®) has completed a Preliminary Assessment (PA) of the Ward McCarty Site (EPA CERCLA Identification Number TXD982549446) located in Liberty, Liberty County, Texas. The United States Environmental Protection Agency (EPA) Region VI retained WESTON to complete this investigation under EPA Contract Number 68-W9-0015 and Work Assignment Number 22-6JZZ. This document represents the final report for the PA. The purpose of this PA Report is to summarize conditions at the site based on the results of the PA.

1.1 OBJECTIVES OF THE INVESTIGATION

The PA is generally the first screening investigation in a series of site assessments that EPA may complete at a known or potential hazardous waste site that is being investigated under CERCLA/SARA prior to its possible inclusion on the National Priorities List (NPL). The primary objectives of the PA are to:

- Identify known or potential hazardous waste source areas at the site and evaluate the threat that migration or exposure of hazardous substances from the site may pose to human health and the environment; and

- Collect information that can be used to assess the site using EPA's Hazard Ranking System (HRS) to help determine whether further investigation of the site under CERCLA/SARA is warranted to list the site on the NPL.

EPA will use the information obtained from the PA to help prioritize further work for the site. Based on the results, EPA may decide that additional investigation of the site is required or assign a Site Evaluation Accomplished (SEA) status to the site.

1.2 SCOPE OF WORK

The PA is a screening investigation of the site. The PA Scope of Work is focused on characterizing the site through the completion of limited site-related research and site reconnaissance activities. As part of this PA, WESTON performed the following major tasks:

- A site-specific Task Work Plan (TWP) and Health and Safety Plan (HASP) was prepared to provide a detailed plan of action for the PA.

- An onsite reconnaissance was preformed to document current site conditions and identify potential sources of hazardous substances at the site. As part of the reconnaissance, a survey of the site's vicinity was completed to identify potential receptors of hazardous substance migration and potential exposure attributable to the site.

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- Information concerning the environmental setting of the site was obtained to describe the groundwater, surface water, soil exposure and air pathways.

- Available regulatory compliance files from Federal, State and local government agencies were reviewed, and telephone interviews were conducted with authorities knowledgeable of the site and its surroundings.

1.3 REPORT FORMAT

The PA Report is presented in a format that is intended to facilitate evaluation of the site using the HRS. The report contains the following sections:

- Section 1 - Introduction,
- Section 2 - Site Characteristics,
- Section 3 - Groundwater Pathway,
- Section 4 - Surface Water Pathway,
- Section 5 - Soil Exposure,
- Section 6 - Air Pathway,
- Section 7 - Conclusions, and
- Section 8 - References.

Additional information is provided in appendices following the text of the report. Photographs of the site are provided in Appendix A, copies of the references used as sources of information for the site are provided in Appendix B, copies of applicable site prevention plans and permits are provided in Appendix C.

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SECTION 2
SITE CHARACTERISTICS

WESTON collected and reviewed available background information regarding the location, description, operational history and regulatory compliance of the site. The discussion in this section of the report is based on this background information, which is referenced throughout the text.

2.1 SITE CHARACTERISTICS

The characteristics of the site are summarized in this following section as follows:

- Site Location,
- Site Ownership,
- Site Description,
- Site Operational History,
- Site Regulatory Compliance History, and
- Nearby Land Use.

2.1.1 Site Location

WESTON initially located the site based upon information provided in EPA project files.

The Ward McCarty Site is located in Liberty, Texas. The site can be accessed by traveling east on United States (US) Highway 90 from Houston to Liberty, Texas. Once in Liberty, proceed north on North Main Street (also known as State Highway 146) for approximately 3 miles. The site is located at 4408 North Main, approximately 200 feet east of the Farm to Market Road 1011 (FM 1011) and SH 146 intersection. The geographic coordinates of the site are approximately 30°05'16" north latitude and 94°45'22" west longitude (Reference 1). A Site Location Map based on a Texas County Highway Road Map and a Site Area Map based on United States Geological Survey (USGS) 7.5-minute topographic quadrangle maps (Reference 2) are provided as Figures 2-1 and 2-2.

2.1.2 Site Ownership

Legally the property is described as all those certain lots, tracts or parcels of land in the George Orr League, Abstract No. 91, Liberty County, Texas, being out of and a part of the Liberty Industrial Foundation 38.520 acre tract (Reference 3).

The property is currently owned by Mr. Ward McCarty. Access for the site was obtained by contacting by Mrs. Judy Walker at P.O. Box 788, Liberty, Texas 77575 and by phone at (409) 336-7313. Copies of the PA site access letter and access agreement are provided as Reference 4.

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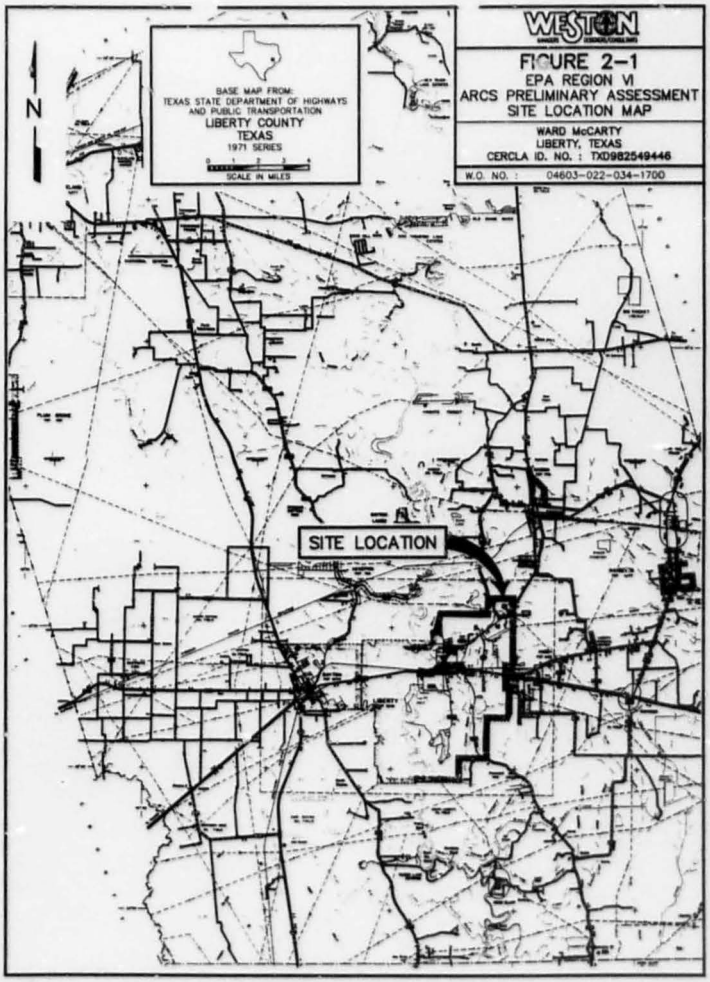

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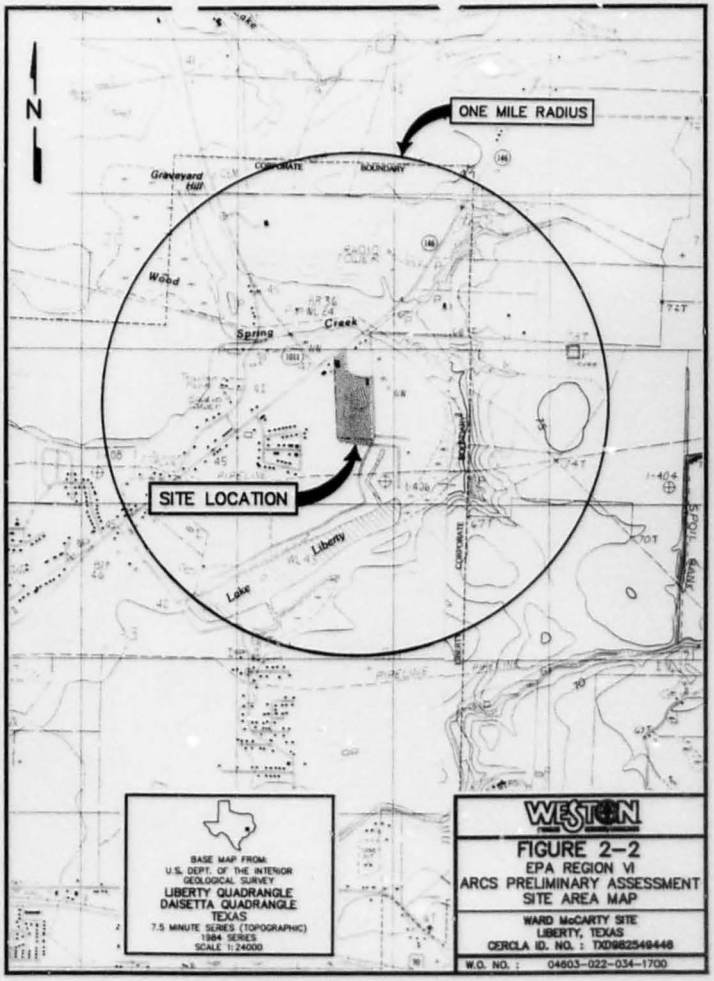

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2.1.3 Site Description

WESTON conducted a site reconnaissance on 11 March 1993. WESTON performed the reconnaissance in general accordance with the following:

- WESTON's Generic Preliminary Assessment Work Plan (Document Control No. 4603-22-0006, dated 15 August 1991), and
- The site-specific TWP prepared by WESTON for the site (Document Control No. 4603-22-0046, dated 10 February 1993).

During site reconnaissance, two WESTON personnel visited the site, accompanied by Mr. McCarty, Mrs. Walker, and Mrs. Linda Mann. The WESTON team performed a site walk through, recorded observations in a logbook and on a checklist, and took photographs to document site conditions. Known or potential sources of hazardous substances at the site were identified, located on a map and described. The area surrounding the site was examined to identify potential receptors, or targets, of hazardous substance migration from the site. Nearby land use and potential alternative source sites also were documented. Copies of the PA field logbook and Site Reconnaissance Checklist are provided as References 5 and 6. A Site Plan was developed based on observations made during the site visit and information gathered during this PA. It is included as Figure 2-3.

The Ward McCarty Site encompasses approximately 22 acres, is generally open, and is bounded to the north and south by SH 146 and a line of trees. The site can be accessed from an unimproved road entering the site off SH 146. Structures onsite include a truck washout area, two buildings and numerous above ground storage tanks (ASTs) (References 3, 5, 6).

The washout area (discussed further in Section 2.2.1) includes a large washout pit and two smaller pits that are used to collect any water that may spillover from the washout pit. This area is used to rinse out vacuum trucks and trailers that return to the site. The rinsate water from the trucks and trailers is discharged into the washout pit where residual oils are allowed to separate from the water. The residual oil is skimmed off and presumably placed into adjacent storage tanks (References 5, 6).

Building #1 measures approximately 75 feet wide and 160 feet long and is located adjacent to and south of a parking area that can be accessed off SH 146. The northern-most 30 feet of this building houses the company offices. In addition, the area located adjacent to the office space and within Building #1 is used for equipment (i.e., trucks) maintenance activities (References 5, 6).

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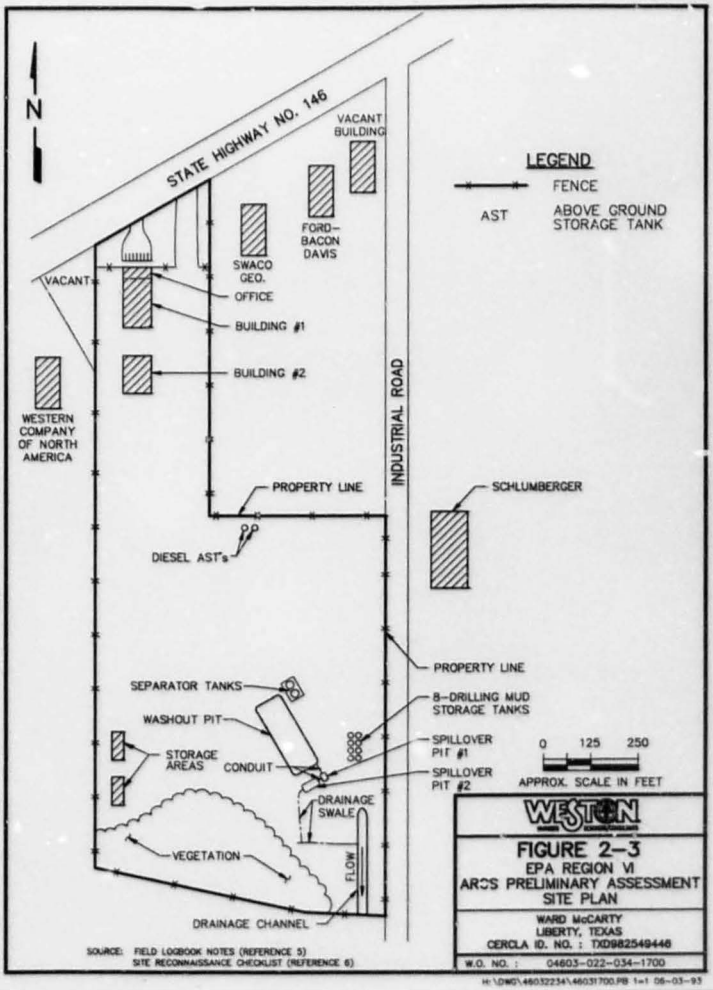

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Building #2 measures approximately 75 feet wide and 100 feet and is located just south of Building #1. This building is used for equipment maintenance activities (References 5, 6).

Twelve ASTs are located onsite and include the following:

- Two diesel ASTs located near the center of the site. These tanks are used to store diesel gasoline that is used for fueling trucks (References 5, 6).
- Eight 400-barrel ASTs located near the eastern most property line in the southeastern portion of the site. These tanks are used to store drilling mud, a lubricant in subsurface drilling (References 5, 6).
- Two 400-barrel ASTs located adjacent to and north of the washout area. These tanks function as separator units that presumably separate oil from water that is collected from the washout pit. These tanks are on a concrete pad which is encompassed by a berm (References 5, 6).

Another notable feature of the site includes two storage areas located in the southwestern portion of the site. A scrap pile including several tanks and some scrap metal are located in the southern-most area. No liners are present in this area and no stressed vegetation was observed (References 5, 6).

There are four tanker trailers located in the northern-most storage area. These tanks are owned by the Federal Depository Insurance Corporation (FDIC) and have been stored onsite since a former competitor went out of business and was presumably foreclosed on by the FDIC (References 5, 6).

A large drainage channel is located approximately 180 feet southeast of the washout area. This channel trends south eventually entering a drainage ditch located south of the property (References 5, 6).

2.1.4 Site Operational History

According to Mrs. Walker, the site has been the location for Ward McCarty, Inc. since the property was purchased in 1974. Ward McCarty, Inc. is an oil field vacuum truck service company. The majority of the company's current activities involves hydrostatic pipeline testing (References 5, 6).

2.1.5 Site Regulatory Compliance History

WESTON reviewed available files and interviewed authorities from regulatory agencies to collect background information regarding the regulatory compliance history of the site. No information regarding regulatory compliance issues was obtained during the PA. Previous investigations are not known to have occurred at the site.

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The following permits and plans were provided voluntarily by Mrs. Walker to WESTON during the reconnaissance, and they are found in Appendix C:

- A Spill Prevention Control and Countermeasure Plan (SPCCP),
- An Oil and Gas Waste Hauler's Permit (Permit No. 1138) issued by the Railroad Commission of Texas, Oil and Gas Division - Underground Injection Control, 5 February 1993, and
- A Permit to Maintain and Use a Pit (Permit No. P005832), Railroad Commission of Texas, Oil and Gas Division, 14 May 1987.

2.1.6 Nearby Land Use

Land use in the vicinity of the site was observed during reconnaissance. The site is located just northeast of the City of Liberty. The land immediately adjacent to the site is described as follows:

- Undeveloped land with a drainage ditch is located on the property south of the site (References 5, 6).
- The property west of the site is the location of an active business, Western Company of North America (References 5, 6).
- SH 146 trends southwest to northeast and borders the northern-most property line of the site (References 5, 6).
- The land east of the site is the location of three business/and or buildings: SWACO GEO., Ford-Bacon Davis, and a vacant building owned by George Cooper. In addition, Industrial Road trends north-to-south and borders the southern part of the site's eastern property line (References 5, 6).

Other notable features within one mile of the site include:

- Lake Liberty located south of the site,
- A small residential neighborhood southwest of the site,
- Two trailer parks located west of the site,
- Pastureland which stables ponies located just north of the site, and
- A small business area located southwest of the site.

Alternative source sites identified which might be contributing a release of hazardous substances similar to those found at the site to the migration pathways include:

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- Activities within the small business area which includes Schlumberger, an oil field service company, and
- Activities in the trailer parks.

2.2 SOURCE WASTE CHARACTERISTICS AND SITE CONCERNS

The potential hazardous waste source areas identified at the site are described in this section along with site-related concerns regarding the migration of hazardous substances attributable to the site via the groundwater, surface water, soil exposure and air pathways.

2.2.1 Known and Potential Hazardous Waste Source Areas

Based on available background information and the results of the PA site reconnaissance effort, three potential hazardous waste source areas (HWSAs) have been identified at the site. These source areas are summarized in Table 2-1, and are described in further detail in the following subsections.

2.2.1.1 Washout Area

The washout area is located adjacent to the two 400-barrel ASTs that are used to separate oil, and includes one washout pit and two spillover pits. The wash out pit measures approximately 75 feet wide, 210 feet long, and 5 feet deep. There was approximately 3 feet of freeboard in this pit during the reconnaissance.

A conduit exits the washout pit and enters a spillover pit (hereafter referred to as Spillover Pit #1) located adjacent to the southwest corner. Spillover Pit #1 measures approximately 15 feet wide, 20 feet long, and 6 feet deep (References 5, 6).

Another spillover pit (hereafter referred to as Spillover Pit #2) is connected via a conduit to Spillover Pit #1. Spillover Pit #2 measures approximately 45 feet wide, 20 feet long, and 6 feet deep. A conduit with a valve was observed exiting this pit into a drainage swale that eventually drains into the drainage channel located in the southwest corner of the site (References 5, 6).

These pits described above have no engineered liners or waste collection systems.

2.2.1.2 Scrap Pile

Several tanks and some scrap metal are located in a storage area located in the southwestern corner of the site. This area measures approximately 50 feet wide and 100 feet long, and the pile is on indigenous soils (References 5, 6).

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TABLE 2-1

SOURCE WASTE CHARACTERISTICS

SOURCE NAME	LOCATION	SOURCE TYPE	ESTIMATED WASTE QUANTITY	DESCRIPTION OF THE SOURCE
Washout Area	Southern half of the site adjacent to two 400-barrel ASTs.	Oil	• Washout Pit = 75 ft. x 210 ft. = 15,750^2. • Pit #1 = 15 ft. x 20 ft. = 300 ft^2. • Pit #2 = 45 ft. x 20 ft. = 900 ft^2. Total = 16,950 ft^2	Residual oil that is the product of rinsing out vacuum trucks that return from oil field related activities.
Scrap Pile	Storage area in the most southwestern corner of the site.	Metal	Area = 50 ft. x 100 ft. = 5,000 ft^2.	Random tanks and materials that are no longer needed and are being stored onsite.
Storage Tanks	Northeast and adjacent to the washout area.	Drilling Mud	Volume = 8 tanks x 400 barrels/tank = 3,200 barrels.	These tanks store drilling mud which is used as a lubricant in subsurface drilling.
	Center part of the site.	Diesel	Volume = 2 tanks x 500 gallons/tank = 1,000 gallons.	These tanks store diesel fuel.
	Northeast and adjacent to the washout area.	Oil	Volume = 2 tanks x 400 barrels/tank = 800 barrels.	These tanks separate oil from water that is removed from the washout area

SOURCES: Field Logbook Notes (Reference 5)
Site Reconnaissance Checklist (Reference 6)

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2.2.1.3 Storage Tanks

As previously discussed in Section 2.1.3, numerous ASTs are located at the site. Eight 400-barrel ASTs are located near the eastern most property line in the southeastern portion of the site. These tanks are used to store drilling mud, a lubricant in subsurface drilling. In addition, two approximately 500-gallon diesel ASTs are located near the center of the site and two 400-barrel ASTs that are used to separate oil from water are located adjacent to the washout area (References 5, 6).

2.2.2 Site Concerns

The migration of hazardous substances from the site and the exposure of humans and other environmental receptors to hazardous substances is not apparent with the exception of the surface water pathway.

The surface water pathway is of concern because of the potential for flooding in the washout area. Flooding could potentially transport oil to the drainage channel and eventually offsite.

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SECTION 3
GROUNDWATER PATHWAY

A discussion of the groundwater pathway, one of four major pathways of potential hazardous waste migration assessed in this report, is provided in this section. The discussion focuses on the aquifer characteristics of the region, the likelihood of a release to groundwater, and the potential targets of hazardous waste migration through the groundwater pathway.

3.1 HYDROGEOLOGIC SETTING

3.1.1 Geologic Framework

The Ward McCarty Site is located in the Lower Coastal Plain physiographic province of Texas. Geologically, this area consists of fluvial, deltaic, coastal marsh, and lagoonal deposits of Miocene to Holocene age. The sedimentary deposits slope gently toward the Gulf of Mexico. From youngest to oldest, the geologic units nearest to the surface at the site include the following (References 7, 8):

- The Pleistocene-age Deweyville Formation,
- The Pleistocene-age Beaumont Formation,
- The Pleistocene-age Montgomery Formation,
- The Pleistocene-age Bentley Formation,
- The Pleistocene-age Willis Formation,
- The Miocene-age Fleming Formation, and
- The Miocene-age Catahoula Formation.

The Deweyville Formation consists of sand, silt, clay, and some gravel in point bar, natural levee, stream channel, and backwater swamps and deposits. Thickness of the Deweyville Formation can be up to approximately 50 feet thick (References 7, 8).

The Beaumont Formation consists mostly of clay, silt, and relatively little sand. This formation was primarily deposited in a fluvial environment consisting of numerous back water swamps, and to a lesser extent coastal marshes and mud flats. The overall thickness of the Beaumont Formation can be up to approximately 100 feet (References 7, 8).

The Montgomery Formation underlies the Beaumont Formation. The Montgomery Formation consists of clay, silt, and very minor siliceous gravel of granule to pebble size. This fluvial deposit can be up to approximately 100 feet thick (References 7, 8).

The Bentley Formation underlies the Montgomery Formation. The Bentley Formation consists of fluvial deposits of clay, silt, sand, and minor amounts of gravel. The thickness of the Bentley Formation can be up to approximately 100 feet (References 7, 8).

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The Willis Formation underlies the Bentley Formation. The Willis Formation consists of fluvial deposits of clay, silt, sand, and siliceous gravel of granule to pebble size with some petrified wood. The overall thickness of the Willis Formation can be up to approximately 100 feet (References 7, 8).

The Fleming Formation underlies the Willis Formation. The Fleming Formation consists of clay, silt, sand, and granule to pebble size gravel with some petrified wood. The thickness of the Fleming Formation can be up to approximately 1300 to 1450 feet (References 7, 8).

The Catahoula Formation underlies the Fleming Formation. The Catahoula Formation consists of mudstone in the upper part and coarse grained quartz sand in the lower 10 to 80 feet. The overall thickness of the Catahoula Formation can be up to 250 to 300 feet (References 7, 8).

The actual thicknesses of the above-described formations at the site are unknown based on information currently available to WESTON.

3.1.2 Groundwater Conditions

The aquifer identified at the Ward McCarty Site is the Gulf Coast Aquifer. This aquifer extends to a maximum depth of approximately 3000 feet below the ground surface. The principal water bearing units within the Gulf Coast Aquifer are the Chicot and Evangeline Aquifers. The Chicot Aquifer occurs in the Holocene alluvium through the Willis Formation, and is believed to be 50 to 75 feet below the ground surface. However, documentation indicating the depth of the saturated zone in the area of the site was not obtained. Most wells in the area of the site are believed to be completed within this aquifer because it yields a sufficient quantity of fresh water at shallow depth (References 9, 10).

The Evangeline Aquifer underlies the Chicot Aquifer at a depth of approximately 725 feet below the ground surface at the site, and is located within the Fleming Formation (References 9, 10, 11).

Large-capacity wells in the Gulf Coast Aquifer have an average yield of 1500 gallons per minute (gpm), and a maximum yield ranging up to 3400 gpm (Reference 9).

3.2 LIKELIHOOD OF RELEASE

Important factors related to the likelihood of a release from a source of hazardous substances at the site to groundwater are presented this section.

3.2.1 Depth to Groundwater

Based on the descriptions of the regional aquifers and given the water levels reported for wells in the area, the depth to the most shallow zone at the site that produces sufficient water for domestic or agricultural uses is approximately 50 feet (Reference 9, 10).

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3.2.2 Net Precipitation

The average annual precipitation in the area of the site is approximately 48 inches. The annual average gross lake surface evaporation rate in the area of the site is approximately 51 inches. Therefore, the average annual net precipitation in the area of the site is approximately minus 3 (-3) inches (Reference 12).

3.2.3 Thickness of Impermeable Layer

The Beaumont Formation is considered to be the most impermeable layer between the surface and groundwater in the Chicot Aquifer. Its thickness at the site is estimated to be approximately 30 to 50 feet (Reference 9, 10).

3.2.4 Hydraulic Conductivity of Impermeable Layer

The hydraulic conductivity of the impermeable layer is estimated to be on the order of 1×10^{-7} centimeters per second (Reference 13). This hydraulic conductivity value has not been verified by testing procedures in the field.

3.3 GROUNDWATER PATHWAY TARGETS

The potential receptors, or targets, of the groundwater pathway include the population and resources which rely on local aquifers as a source of water supply. The targets identified for the groundwater pathway are discussed in the following sections.

3.3.1 Nearest Well

The nearest well to the Ward McCarty Site (shown as Well No. 3E on Figure 3-1 and listed on Table 3-1) is located approximately 0.25 mile northeast of the site. Records for this well have not been submitted and filed with the Texas Water Development Board (TWDB), and therefore, its use and other pertinent information is unknown (Reference 2, 14). WESTON assumes that Well No. 3E is an active domestic supply well.

Based on 1990 Census information for Liberty, Texas indicating 2.64 people per household, and assuming that Well No. 3E is used as a domestic well and represents a residence, approximately three people are assumed to use Well No. 3E as their drinking water supply source (Reference 15).

3.3.2 Other Nearby Wells

There are three possibly active groundwater wells located within 1 mile of the site in addition to Well No. 3E. The TWDB has documented two wells (Well No.'s 3G and 3D) located approximately 0.6 mile northwest of the site. Records for these wells have not been submitted and filed with the TWDB, and therefore, their uses and other pertinent information are unknown (Reference 2, 14). WESTON assumes that Well No.'s 3G and 3D are active domestic supply wells.

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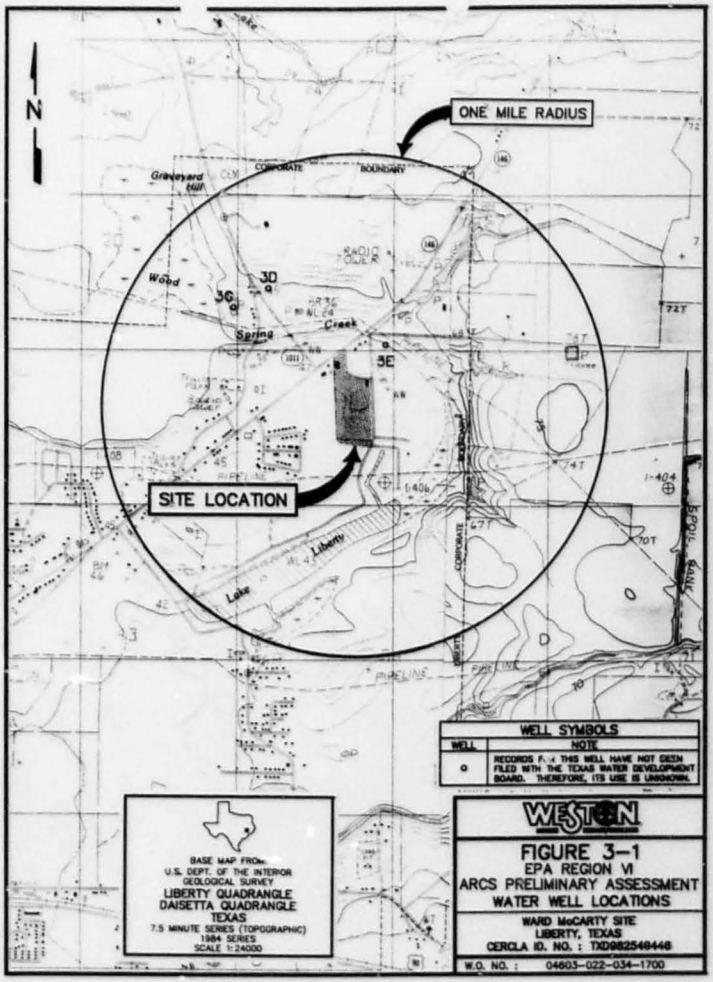

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PRELIMINARY ASSESSMENT REPORT

WARD McCARTY
LIBERTY, TEXAS

EPA CERCLA I.D. NO. TXD982549446

TABLE 3-1

WATER WELL LOCATIONS

WELL ID.	WELL OWNER	APPROXIMATE DISTANCE FROM SITE (miles)	TOTAL WELL DEPTH (feet)	DEPTH TO TOP OF SCREEN (feet)	ESTIMATED POPULATION SERVED	STATUS AND TYPE OF WELL
3E	Unknown[1]	0.25	Unknown[1]	Unknown[1]	3	Active[1]; Domestic (Assumed)
5	City of Liberty	0.5	1700	1640	2578	Active; Public Supply
3D	Unknown[1]	0.6	Unknown[1]	Unknown[1]	3	Active[1]; Domestic (Assumed)
3G	Unknown[1]	0.6	Unknown[1]	Unknown[1]	3	Active[1]; Domestic (Assumed)

[1]The Texas Water Development Board does not have the information available.

SOURCES: USGS 7.5-Minute Topographic Maps (Reference 2)
Liberty Water Department (Reference 11)
Texas Water Development Board (Reference 14)
1990 Census Information (Reference 15)

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According to Mr. Rutherford of the Liberty Water Department, one of the three City of Liberty public supply wells (listed as Well No. 5 in Table 3-1) is located approximately 0.5 mile north of the intersection of Farm to Market Road 1011 (FM 1011) and SH 146 (Reference 11). City of Liberty Well No. 5 was completed to a depth of approximately 1700 feet with the top of screen at a depth of 1640 feet (Reference 11). This well is not shown on Figure 3-1 since it has not been identified by the TWDB.

Based on 1990 Census information for Liberty, Texas indicating 2.64 people per household, and assuming that Well No.'s 3D and 3G are used as domestic wells and represent residences, approximately three people are assumed to use each well (Reference 15).

Based on 1990 Census information, 7733 people reside in Liberty, Texas. Subsequently, it is assumed that City of Liberty Well No. 5 provides drinking water for one-third of the City of Liberty based on the assumption that city water contributions are obtained equally between each of the three public supply wells. Therefore, it is assumed that this well supplies drinking water for approximately 2578 people (References 11, 15).

3.3.3 Well Head Protection Areas

No Well Head Protection Areas (WHPAs) have been identified within 4 miles of the site.

3.3.4 Groundwater Resources

Groundwater from the Gulf Coast Aquifer is commonly used for stock and irrigation purposes (Reference 9). Groundwater near the site is considered to be used as a resource since uses for several of the nearby wells have not been documented and they may be used for agricultural purposes.

3.4 GROUNDWATER PATHWAY CONCLUSIONS

An observed release of hazardous substances to groundwater attributable to the site has not been documented. Based on the site reconnaissance and available information regarding the site history, a release to groundwater is not probable for the following reasons:

- The near surface soils have low permeabilities, and
- The depth to the most shallow groundwater is believed to be 50 or more feet.

There are several groundwater wells located within 1 mile of the site, including a public supply well for the City of Liberty, and the City of Liberty is dependent on groundwater for their drinking supply (References 5, 6, 7, 8, 9, 10, 11, 14).

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Remaining data gaps for the groundwater pathway include the following:

- Identification of Wellhead Protection Areas,
- Determination of the exact number of people per well near the site and the uses for Well No.'s 3E, 3D, and 3G, and
- Determination of thicknesses of the formations located at the site.

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SECTION 4
SURFACE WATER PATHWAY

Surface water is the second of four pathways of potential hazardous waste migration assessed for the site. The types of surface water draining the site, the Probable Point of Entry (PPE) for a hazardous substance from the site to enter surface water, the likelihood of a release, and the potential targets of the pathway are discussed in this section.

4.1 HYDROLOGIC SETTING

The Ward McCarty Site is located in the Trinity River Basin. This basin begins near Dallas, Texas and extends to the south for approximately 550 miles. The Trinity Basin contains more population and industry than any other basin in Texas. Most of the lakes in the basin, with the exception of Lake Livingston, are fed mainly by intermittent streams (Reference 9).

On a more local scale, surface water at the site flows through an overland flow segment, enters the surface water (the Trinity River) at the PPE, and flows downstream. These segments of the surface water pathway are discussed in the following sections.

4.1.1 Overland Flow Segment

The general topography of the site is relatively flat with a portion of the southern part of the site having a slight gradient to the south. Surface runoff from the site generally flows into a drainage ditch along SH 146 that eventually discharges northeast of the site into Spring Creek (hereafter referred to as the primary surface water pathway). However, a portion of the runoff from the southern half of the site potentially drains into the drainage channel located in the southeastern corner of the site (hereafter referred to as the secondary surface water pathway) (Reference 5, 6, 16).

4.1.2 Surface Water Flow Path

The primary surface water pathway is illustrated in Figure 4-1 (Reference 17). The flow path of surface water from the PPE to a point 15 stream miles downstream in this pathway is summarized in Table 4-1.

The secondary surface water pathway includes potential overland flow from the site into the drainage channel located in the southeastern part of the site. The flow path for this surface water pathway is not illustrated on Figure 4-1 or summarized in Table 4-1 because it is included within the primary surface water pathway which is the most conservative overland route.

4.1.3 Probable Point of Entry

The PPE for a release of hazardous substance from a source at the site to a surface water body in the primary surface water pathway is located approximately 150 feet downstream from the site at Spring Creek as shown on Figure 4-1 (Reference 17). The PPE for the secondary surface

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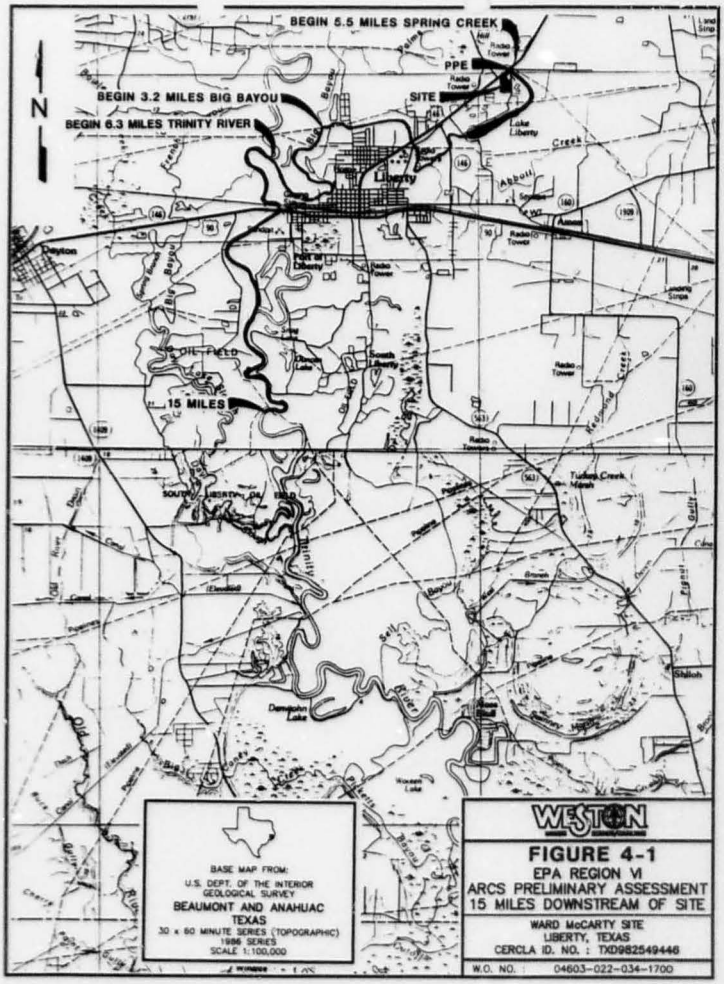

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PRELIMINARY ASSESSMENT REPORT

WARD McCARTY
LIBERTY, TEXAS

EPA CERCLA I.D. NO. TXD982549446

TABLE 4-1

SURFACE WATER DRAINAGE PATHWAY SUMMARY

SURFACE WATER SEGMENT	APPROXIMATE DISTANCE FROM A SOURCE AREA IN MILES	APPROXIMATE DISTANCE FROM PPE	ESTIMATED FLOW RATE AND DIRECTION OF FLOW (Cubic Feet Per Second)
Spring Creek (Through Lake Liberty)	0.03	0	10 TO 100 CFS[1]; SOUTHWEST, WEST
Big Bayou	5.53	5.5	10 TO 100 CFS[1]; SOUTH
Trinity River	8.73	8.7	10,000 TO 100,000 CFS[1]; SOUTH

[1]This value is estimated based on size of the stream.

Source: 30 x 60 Minute Quadrangle Map, Beaumont and Anahuac, Texas, 1985 Series (Reference 17)

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water pathway is located approximately 500 feet downstream of the site at Lake Liberty via the onsite drainage channel discharging into a drainage easement and another drainage channel (References 5, 6, 17).

4.2 LIKELIHOOD OF RELEASE

Important factors related to the likelihood of a release from a source of hazardous substances at the site to surface water are presented in the following sections.

4.2.1 Distance to Surface Water

The shortest distance from the site to a notable overland flow drainage pathway is adjacent to the site (References 2, 16, 17). The distance from the site to the surface water PPE via this pathway is approximately 150 stream feet according to Figure 4-1 (Reference 17).

4.2.2 Flood Frequency

Based upon flood insurance maps obtained from the Federal Emergency Management Agency (FEMA), the site is located outside a 500-year floodplain (Reference 18).

4.2.3 2-Year 24-Hour Rainfall

The 2-year 24-hour rainfall for the area of the site is approximately 4.75 inches (Reference 19).

4.2.4 Flood Containment

With the exception of the two 400-barrel ASTs located adjacent to the washout pit, the potential HWSAs at the site have no containment features which would prevent or contain a release in the event that the sources became flooded.

4.3 SURFACE WATER PATHWAY TARGETS

The potential targets of the surface water pathway include the population relying on surface water downstream of the PPE as a source of drinking water, as well as the downstream fisheries, sensitive environments and surface water resources. The targets identified within the surface water pathway are discussed in the following sections.

4.3.1 Drinking Water Intakes

No drinking water intakes are known to be present within the surface water pathway.

4.3.2 Wetlands and Other Sensitive Environments

According to federal wetlands inventory maps (Reference 20), wetlands are present along the surface water pathway. The total wetlands frontage 15 miles downstream of the PPE is approximately 5.1 miles. The locations and frontage of wetlands are summarized in Table 4-2.

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PRELIMINARY ASSESSMENT REPORT

WARD McCARTY
LIBERTY, TEXAS

EPA CERCLA I.D. NO. TXD982549446

TABLE 4-2

WETLANDS AND OTHER SENSITIVE ENVIRONMENTS

Stream Segment Name	Frontage (Miles)
Spring Creek	2.2
Big Bayou	0.6
Trinity River	2.3

SOURCE: Federal Wetlands Inventory Map (Reference 20)

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Several federally-listed threatened or endangered species are thought to potentially occupy the surface water pathway environments in the vicinity of the site (Reference 21). These are listed in Table 4-3.

4.3.3 Fisheries

No commercial fisheries have been identified within the surface water pathway. However, segments of the surface water pathway, such as Lake Liberty, Big Bayou, and the Trinity River, may be used for recreational fishing (Reference 17). Fishing in these water bodies was not observed during reconnaissance of the surface water pathway (Reference 5).

4.4 SURFACE WATER PATHWAY CONCLUSIONS

An observed release of hazardous substances to the surface water pathway attributable to the site has not been documented.

A release to surface water attributable to the Ward McCarty Site is possible but not probable due to the types of potential HWSAs at the site (References 5, 6).

Remaining data gaps for the surface water pathway include the following:

- Documentation of recreational fishing in the Trinity River, and
- Specific location of endangered species along the surface water pathway.

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PRELIMINARY ASSESSMENT REPORT

WARD McCARTY
LIBERTY, TEXAS

EPA CERCLA I.D. NO. TXD982549446

TABLE 4-3

FEDERALLY-LISTED THREATENED AND ENDANGERED SPECIES

TYPE	Common Name	Scientific Name	STATUS	Notes
Amphibian	Houston toad	*Bufo houstonensis*	Endangered	Potential occurrence
Birds	Bald eagle	*Haliaeetus leucocephalus*	Endangered	Nesting activity and winter concentration
	Red-cockaded woodpecker	*Picoides borealis*	Endangered	Year-round resident

SOURCE: U.S. Fish and Wildlife Service (Reference 21)

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SECTION 5
SOIL EXPOSURE

Soil exposure is another potential route of exposure to hazardous substances attributable to the site. The discussion in this section focuses on the important soil exposure factors such as soil type, area of contamination, accessibility and the likelihood of exposure, and the potential targets.

5.1 SURFICIAL CONDITIONS

5.1.1 Soil Type

The soil types found at the Ward McCarty Site include the Bienville and Kenefick Series. Generally, these series consist of deep, moderately well drained and permeable soils. These soils generally formed in sandy and sandy clay loam, and slopes range from 0 to 5 percent (Reference 22).

5.1.2 Areas of Contamination

No areas of potential soil contamination onsite were observed during site reconnaissance activities (References 5, 6).

5.2 LIKELIHOOD OF EXPOSURE

Important factors related to the likelihood of exposure to an area of contaminated soil or direct contact with another source of hazardous substances at the site are presented in the following sections.

5.2.1 Attractiveness of the Site

The Ward McCarty Site is not used for recreational purposes. The site is located just northeast of the City of Liberty, Texas (References 5, 6).

5.2.2 Site Accessibility

The Ward McCarty Site is easily accessible off SH 146 just northeast of Liberty, Texas. However, a fence encompasses the entire site with access only attainable through a gate at the north end of the site. The gate presumably remains open during business hours and no guard booth is present (References 5, 6).

5.3 SOIL EXPOSURE TARGETS

The resident population living or working in an area of soil contamination, the population living near areas of soil contamination, designated recreational areas and terrestrial resources such as agriculture are potential targets of soil exposure. The soil exposure targets identified are summarized in the following sections.

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5.3.1 Resident Population

The resident population includes those persons in houses, schools or daycare facilities who are located on a property where soil contamination attributable to the site has been documented and whose residence is within 200 feet of that contamination.

The Ward McCarty Site is the location of an active business involving oil related activities which are carried out by 23 workers who are onsite daily.

It is not suspected that areas of soil contamination are present in offsite properties around the site. Therefore, the people living in these offsite areas cannot be counted as a resident population.

5.3.2 Nearby Population

The nearby population includes persons who live in houses, or attend schools or daycare centers within 1 mile of areas of soil contamination attributable to the site.

USGS 7.5-minute topographic maps (Reference 2) and 1990 Census information (Reference 15) were used to estimate the population living in specific distance intervals around the site. The population distribution is summarized in Table 5-1.

Based on 1990 Census information, there are approximately 218 persons per square mile and 2.6 persons per household living Liberty, Liberty County, Texas (Reference 15).

No population centers (i.e., churches, schools) are present within 1 mile of the site (Reference 2).

5.3.3 Sensitive Environments

Liberty County, Texas is a habitat for the Houston toad, red-cockaded woodpecker, and bald eagle, all of which are endangered species (Reference 21).

5.3.4 Resources

No resources are known to exist near the site.

5.4 SOIL EXPOSURE CONCLUSIONS

Observed contamination has not been documented at the site, and WESTON did not observe any potential areas of contamination during site reconnaissance activities.

Remaining data gaps for soil exposure include determining the exact population within 1 mile of the site.

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PRELIMINARY ASSESSMENT REPORT

WARD McCARTY
LIBERTY, TEXAS

EPA CERCLA I.D. NO. TXD982549446

TABLE 5-1

NEARBY POPULATION WITHIN ONE MILE

DISTANCE INTERVAL (miles)	ESTIMATED POPULATION	REFERENCE
0 to 1/4	8	2, 15
1/4 to 1/2	101	2, 15
1/2 to 1	101	2, 15

Sources: USGS 7.5-Minute Topographic Maps (Reference 2)
1990 Census Information (Reference 15)

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SECTION 6
AIR PATHWAY

The discussion in this section of the report focuses on the air pathway, another potential route of hazardous substance migration from the site. Atmospheric conditions, the likelihood of a release to air, and potential air pathway targets are identified below.

6.1 ATMOSPHERIC CONDITIONS

6.1.1 Meteorological Information

A wind rose for the region is available in Reference 12.

Information concerning rainfall in the region has been presented in Section 3.2.2 of the report where it fits more appropriately within the HRS-related format.

6.1.2 Air Monitoring Results

WESTON completed site reconnaissance activities in accordance with a site-specific Health and Safety Plan (HASP) prepared prior to the investigation. The reconnaissance was performed using a standard Level-D personal protection protocol in which coveralls and steel-toed boots are worn.

During onsite reconnaissance, the designated WESTON Site Health and Safety Coordinator (SHSC) performed continuous air monitoring of the breathing zone using a Foxboro-brand Organic Vapor Analyzer (OVA). The OVA was used to qualitatively monitor for organic vapor concentrations in the air. Conditions requiring an upgrade in the level of personal protection were not encountered by the field team. No readings above background were measured on the OVA.

6.2 LIKELIHOOD OF RELEASE

An observed release of hazardous substances from the potential HWSAs at the site to the air pathway was not observed during reconnaissance activities. Visual observations have been made and no analytical data is available to substantiate a release to air. Considering the nature of the HWSAs at the site, a significant release to air of gases or particulates is not suspected.

6.3 AIR PATHWAY TARGETS

The population, resources and sensitive environments within 4 miles of the site are potential targets of a release of hazardous constituents to the air pathway. The targets identified for the air pathway are discussed in the following sections.

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6.3.1 Population Within Four Miles

Using USGS 7.5-minute topographic maps (Reference 2), 1990 Census information (Reference 15), and the EPA Geographical Exposure Modelling System (GEMS) (Reference 23), WESTON identified the approximate population residing in specific distance intervals within approximately four miles of the site based on the number of houses present. Houses are represented by small black squares on Figure 2-2. This population is summarized in Table 6-1.

6.3.2 Sensitive Environments

Sensitive environments have been identified previously in this report. Surface water-related sensitive environments have been described in Section 4.3 - Surface Water Pathway Targets. Terrestrial sensitive environments have been discussed in Section 5.3 - Soil Exposure Targets.

6.3.3 Resources

Terrestrial resources that may be targets of the air pathway have been identified in Section 5.3 - Soil Exposure Targets.

6.4 AIR PATHWAY CONCLUSIONS

An observed release of hazardous substances to the air pathway has not been documented.

A release to air is not of concern because a notable release to air from the onsite source areas are not suspected. A residential neighborhood is located within 0.5 mile of the site. However, the potential HWSAs onsite are not suspected to release any particulates or gases which would endanger the nearby area.

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PRELIMINARY ASSESSMENT REPORT

WARD McCARTY
LIBERTY, TEXAS

EPA CERCLA I.D. NO. TXD982549446

TABLE 6-1

NEARBY POPULATION WITHIN FOUR MILES

DISTANCE INTERVAL (miles)	ESTIMATED POPULATION	REFERENCE
0 to 1/4	31[1]	2, 15
1/4 to 1/2	101	2, 15
1/2 to 1	101	2, 15
1 to 2	3785	23
2 to 3	2710	23
3 to 4	2204	23

[1]Estimated population includes 23 workers at the site.

Sources: USGS 7.5-Minute Topographic Maps (Reference 2)
1990 Census Information (Reference 15)
EPA Geographic Exposure Modelling System (GEMS) (Reference 23)

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SECTION 7
CONCLUSIONS

The Ward McCarty Site is located in Liberty, Liberty County, Texas. This active site encompasses approximately 22 acres and has been the location for Ward McCarty, Inc. operations since 1974. Ward McCarty activities include hydrostatic testing of pipelines and routine oil field work using vacuum trucks. Structures onsite include a washout area, two buildings, and numerous ASTs (References 5, 6).

Potential HWSAs identified at the site include the following:

- A truck washout area which includes a washout pit measuring approximately 75 feet wide and 210 feet long, and two spillover pits, one measuring approximately 15 feet wide and 20 feet long, and the other measuring approximately 45 feet wide and 20 feet long. The pits in this area are used to temporarily store rinsate water that is created from cleaning vacuum trucks.

- A scrap pile which includes tanks and metal is located in the southwestern corner of the site. This area measures approximately 50 feet wide and 100 feet long.

- Twelve ASTs are located onsite. Eight ASTs are used to store drilling mud (a lubricant used in subsurface drilling), two ASTs are used to diesel fuel, and two ASTs are used to separate oil from water that is removed from the washout pits.

Concerns associated with the migration and exposure pathways are summarized as follows:

- Hazardous substances have not been documented onsite. Sampling of the potential HWSAs is needed to document source waste characteristics of the site and to verify that hazardous substances are present.

- A release to surface water, groundwater, and air is not suspected based on information currently available. In addition, potential soil contamination was not observed during the site reconnaissance.

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SECTION 8
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1. Latitude and Longitude Calculation Worksheet, Roy F. Weston, Inc., 17 March 1993.

2. 7.5 Minute Quadrangle Topographic Map, United States Department of the Interior, Geological Survey, Daisetta Series, Liberty Series, 1984.

3. Assumption Deed (with a property plat), State of Texas, Volume 740, Pages 667-669. Warranty Deeds (not included) for the Ward McCarty Site include: Volume 723, Page 923.

4. Site Access Letter and Consent for Access to Property Agreement, from Environmental Protection Agency to Ms. Judy Walker, 2 February 1993.

5. Field Logbook Notes, Roy F. Weston, Inc., 11 March 1993.

6. Site Reconnaissance Checklist, Roy F. Weston, Inc., 11 March 1993.

7. Geologic Atlas of Texas (Beaumont Sheet), Bureau of Economic Geology, The University of Texas at Austin, February 1968.

8. "The Geology of Texas, Volume I, Stratigraphy", Bureau of Economic Geology, The University of Texas at Austin, Seventh Printing 1978.

9. "The State of Texas Water Quality Inventory", Texas Department of Water Resources, 6th Edition, 1982.

10. "Report 236: Stratigraphic and Hydrogeologic Framework of Part of the Coastal Plain of Texas", United States Geological Survey and Texas Department of Water Resources, July 1979.

11. Phone Conversation Record, Mr. Dennis Hayes of Roy F. Weston, Inc. with Mr. R.B. Rutherford of the Liberty Water Department, 2 February 1993.

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12. "Climatic Atlas of Texas", Texas Department of Water Resources, December 1983.

13. "Handbook - Groundwater", United States Environmental Protection Agency, Office of Research and Development, March 1987.

14. Water Well Location Maps and Records, Texas Water Development Board, Austin, Texas, March 1993.

15. "1990 Census of Population and Housing, Summary Population and Housing Characteristics, Texas", United States Department of Commerce, Economics and Statistics Administration, August 1991.

16. Phone Conversation Record, Mr. Thom Rogers of Roy F. Weston, Inc. and Mr. Ed Barlow of Sparks and Barlow, Inc., 31 March 1993.

17. 30 x 60 Minute Map (Scale 1:100,000), United States Department of the Interior, Geological Survey, Beaumont Series, Anahuac Series, 1985.

18. Flood Insurance Rate Map - City of Liberty, Liberty County, Texas, Federal Emergency Management Agency, Community-Panel No. 4804410025A, 18 November 1988.

19. 2-Year 24-Hour Rainfall Map, United States Department of Commerce, 1961.

20. 7.5 Minute Quadrangle Wetlands Inventory Map, United States Department of the Interior, Geological Survey, Liberty Series, 1984.

21. Liberty County Endangered Species and Sensitive Environments, United States Department of Interior, Fish and Wildlife Services, Houston, Texas, 1 May 1992.

22. Soil Survey of Liberty County, Texas, United States Department of Agriculture, Soil Conservation Service, 30 May 1989.

23. Geographical Exposure Modelling System, United States Environmental Protection Agency.

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APPENDIX A

PHOTOGRAPH DOCUMENTATION

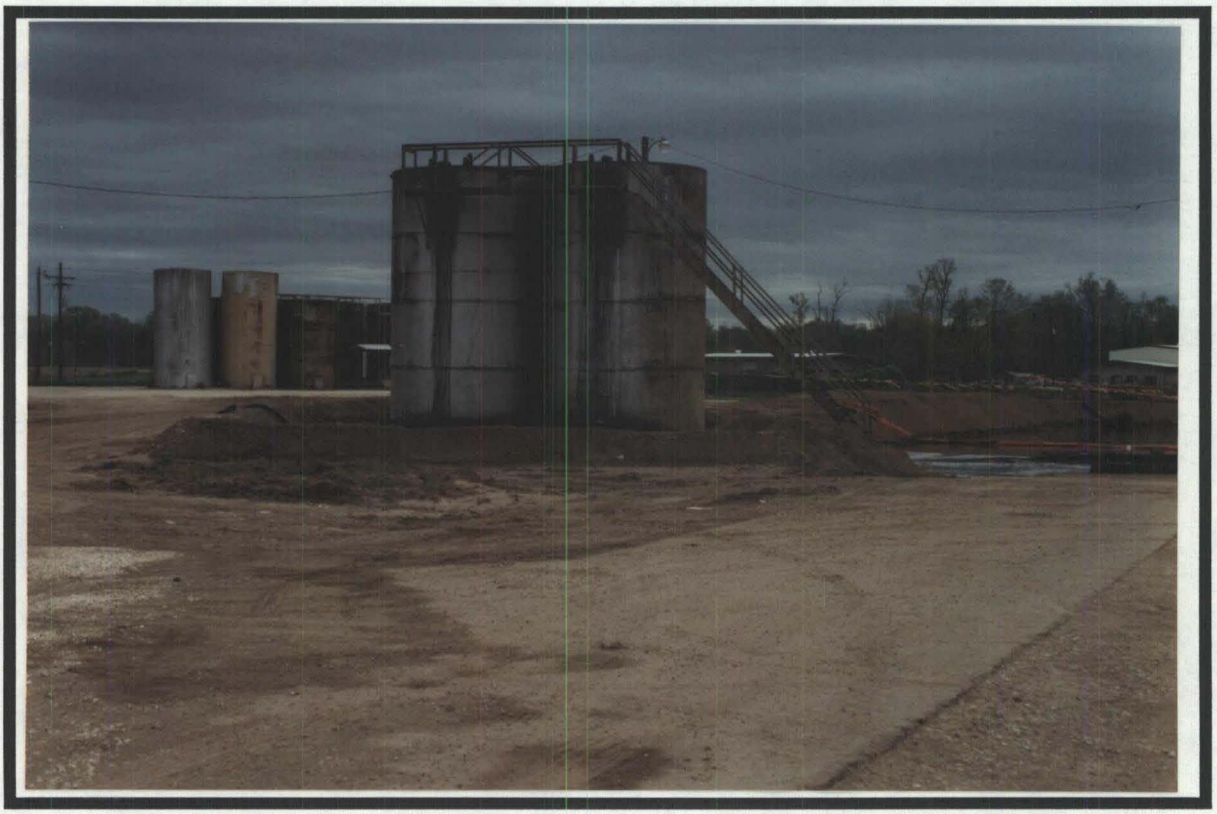
PHOTOGRAPH NO.: A-1

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer RJU
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is northwest. The photograph shows the two buildings onsite. The northern-most building consists of the company's office and a maintenance shop with four garages. The building directly behind the previous building is a maintenance shop.

PHOTOGRAPH NO.: A-2

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer RJU
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is north. The photograph was taken from the back portion of the site, and it shows south side of the maintenance shop and undeveloped land.

PHOTOGRAPH NO.: A-3

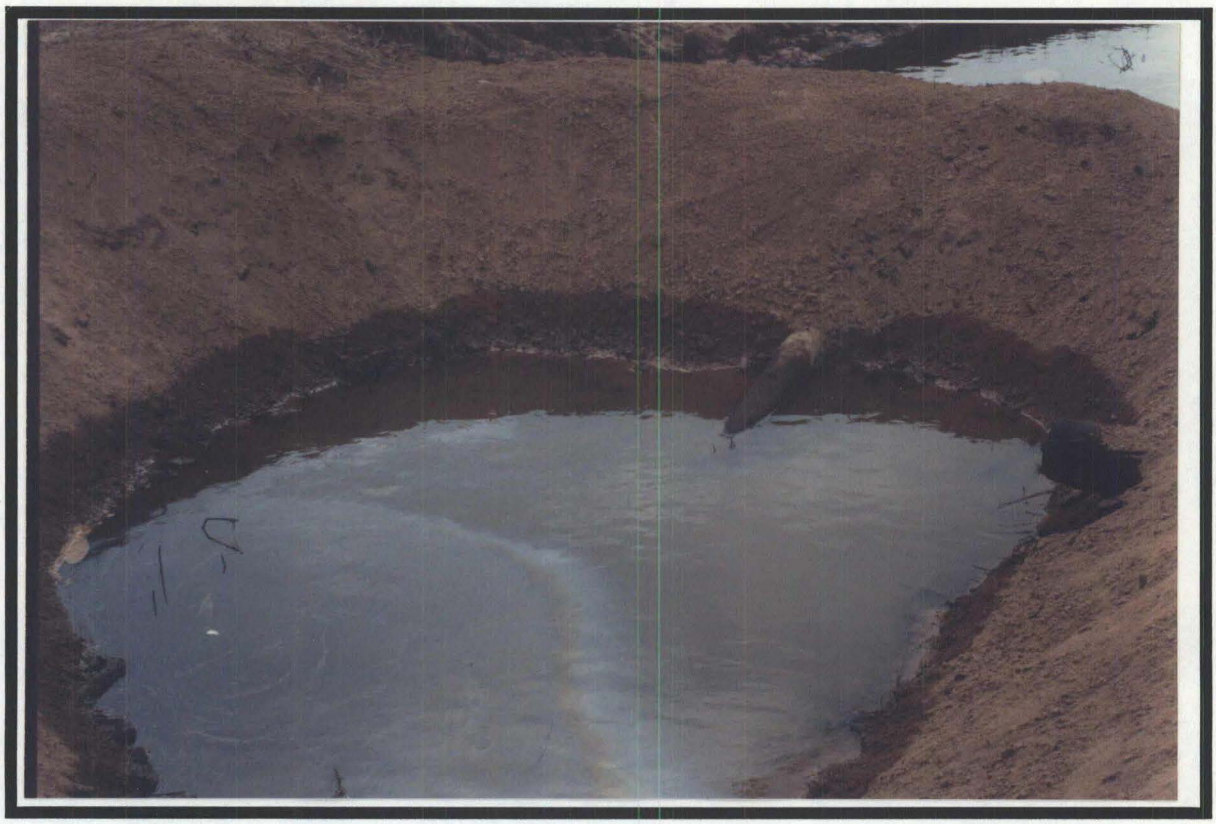


Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is southeast. The photograph shows two above ground storage tanks used to separate oil from water.

PHOTOGRAPH NO.: A-4

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer RJU
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is southeast. The photograph shows the wash out pit. The building shown in the background belongs to Schlumberger, and it is located across the street and on the east side of Industrial Road.

PHOTOGRAPH NO.: A-5



Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer RJU
Date of Photograph:	11 March 1993
Description:	The photograph shows the primary spillover pit. In addition, two conduits are shown in the photograph. The conduit located on the right hand side of the photograph and above the water level connects the spillover pit to the wash out pit. The conduit shown entering the water is connected to the secondary spillover pit. A film on the water is visible.

PHOTOGRAPH NO.: A-6

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer
Date of Photograph:	11 March 1993
Description:	The photograph shows the secondary spillover pit. This pit is connected via a conduit to the primary spillover pit.

PHOTOGRAPH NO.: A-7

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer RJU
Date of Photograph:	11 March 1993
Description:	The photograph shows a conduit exiting the secondary spillover pit. In addition, a rubber hose is shown extending from the conduit.

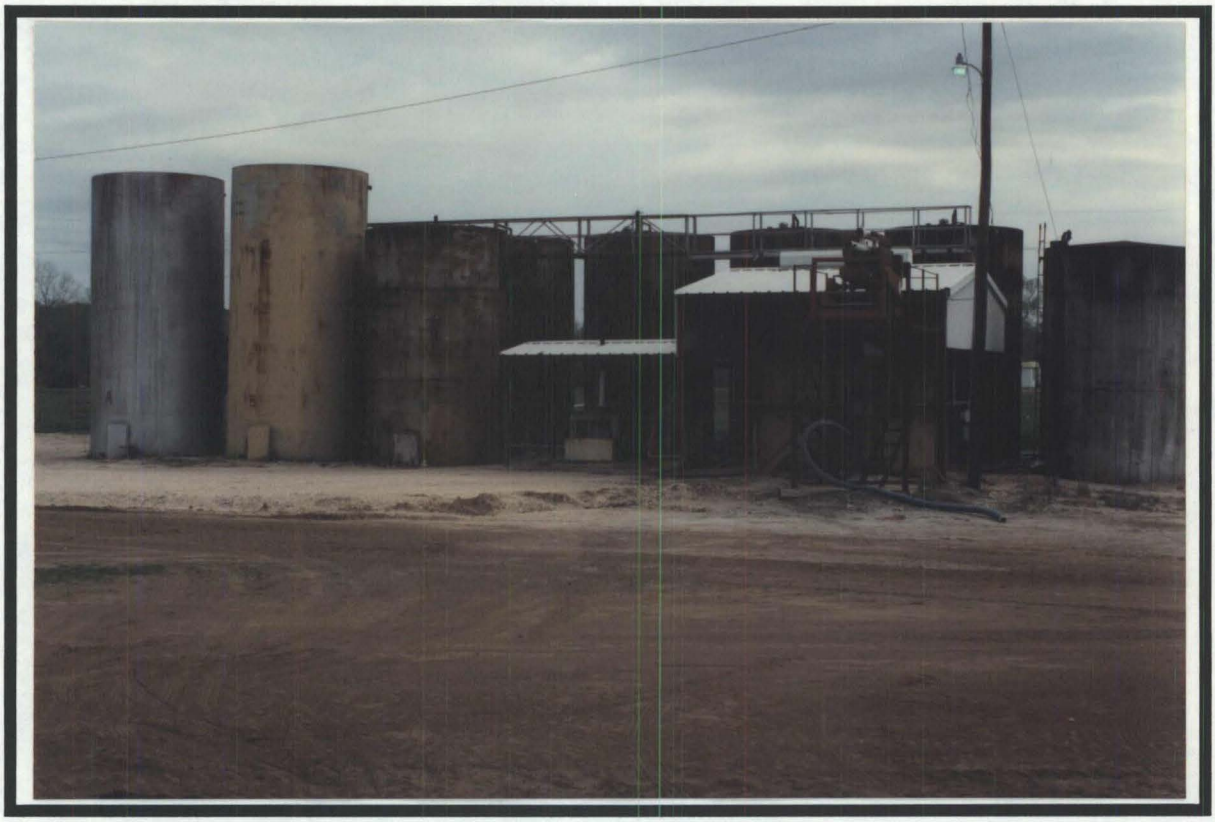
PHOTOGRAPH NO.: A-8

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer RJU
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is south. The photograph shows a drainage ditch beginning at the southwest end of the secondary spillover pit and trending south. This ditch eventually trends to the east and eventually discharges into a drainage channel that flows southward.

PHOTOGRAPH NO.: A-9

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer RJU
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is southeast. The photograph shows the drainage channel referenced in Photograph A-8. The flow in this channel is to the south.

PHOTOGRAPH NO.: A-10



Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is east. The photograph shows the eight storage tanks used in the drilling mud operations.

PHOTOGRAPH NO.: A-11

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer RJU
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is northeast. The photograph shows two above ground storage tanks used to store diesel fuel.

PHOTOGRAPH NO.: A-12

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is west/northwest. An above ground storage tank and pump are shown in the photograph.

PHOTOGRAPH NO.: A-13

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is south. The treeline in the photograph indicates the south property line.

PHOTOGRAPH NO.: A-14

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser
Witness:	Robert J. Ullmer
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is northwest. The photograph shows an area where tanker trucks are stored.

PHOTOGRAPH NO.: A-15

Site Name:	Ward McCarty
Site Location:	Liberty, Texas
Cerclis I.D. No.:	TXD982549446
Weston Work Order No.:	04603-022-034-1700
Photographer:	Jeff S. Wormser JSW
Witness:	Robert J. Ullmer
Date of Photograph:	11 March 1993
Description:	The direction of the photograph is south. The area in southwestern corner of the site where empty tanks and drums are stored.

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APPENDIX B

REFERENCES

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REFERENCES

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REFERENCE 1

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LAT DE AND LONGITUDE CALCULATION W KSHEET'
USING GEOGRAPHIC INFORMATION SYSTEM AND ArcCAD

SITE NAME: WARD MCCARTY CERCLIS #: TXD982549446

AKA: _____ SSID: _____

ADDRESS: _____

CITY: LIBERTY STATE: TEXAS ZIP CODE: _____

SITE REFERENCE POINT: _____

USGS QUAD MAP NAME: LIBERTY TOWNSHIP: ____ N/S RANGE: ____ E/W

SCALE: 1:24,000 MAP DATE: 1984 SECTION: ____ 1/4 ____ 1/4 ____ 1/4

MAP DATUM: (1927) 1983 (CIRCLE ONE) MERIDIAN: _____

COORDINATES FROM CONTROL POINT #1 (NORTHWEST 2.5' GRID TICK)

LONGITUDE: 94 ° 50' 00" LATITUDE: 30 ° 05' 00"

COORDINATES FROM CONTROL POINT #2 (SOUTHWEST 2.5' GRID TICK)

LONGITUDE: 94 ° 50' 00" LATITUDE: 30 ° 02' 30"

COORDINATES FROM CHECK POINT #3 (NORTHEAST 2.5' GRID TICK)

LONGITUDE: 94 ° 47' 30" LATITUDE: 30 ° 05' 00"

COORDINATES FROM CHECK POINT #4 (SOUTHEAST 2.5' GRID TICK)

LONGITUDE: 94 ° 47' 30" LATITUDE: 30 ° 02' 30"

1. INPUT FILE A:\MCARTY\INPUT1
2. OUTPUT FILE A:\MCARTY\OUTPUT1
3. INPUT FILE A:\MCARTY\INPUT2
4. OUTPUT FILE A:\MCARTY\OUTPUT2

SITE LATITUDE: 30 ° 05' 16.14"

SITE LONGITUDE: 94 ° 45' 21.71"

INVESTIGATOR: _____ DATE: _____

CAD OPERATOR PETE BULOT DATE: MARCH 17, 1993

1) THE GEOGRAPHIC INFORMATION SYSTEM (GIS) AND ArcCAD WERE USED TO CALCULATE SITE LATITUDE AND LONGITUDE.

2) COORDINATE FILE PRINTOUT IS ATTACHED.

arcs:4803232B:latlong.map(ae)

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WARD McCARTY

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        94 50 00          30 02 30        &rem CONTROL POINT 2

A:\MCARTY>TYPE OUTPUT1
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        3752888.5865          180054.4127    &rem CHECK POINT 4
        3763279.3011          197382.1444    &rem SITE LOCATION

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   94 50  0.00    30  2 30.00     &rem CONTROL POINT 2
   94 47 29.71    30  4 59.90     &rem CHECK POINT 3
   94 47 29.65    30  2 29.97     &rem CHECK POINT 4
   94 45 21.71    30  5 16.14     &rem SITE LOCATION

A:\MCARTY>
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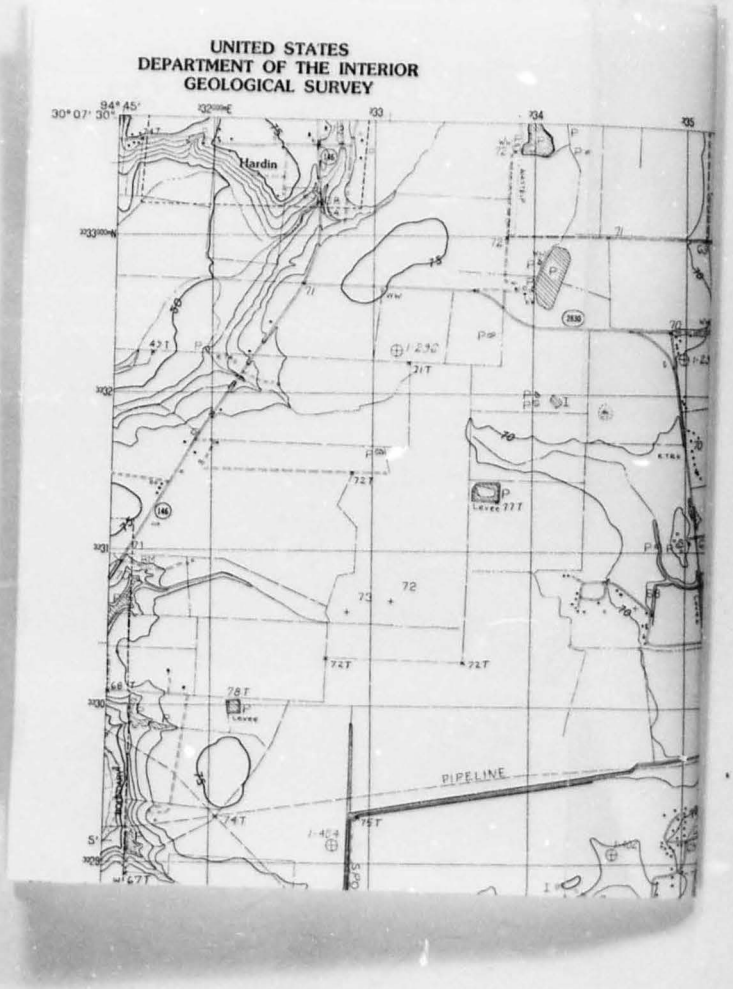

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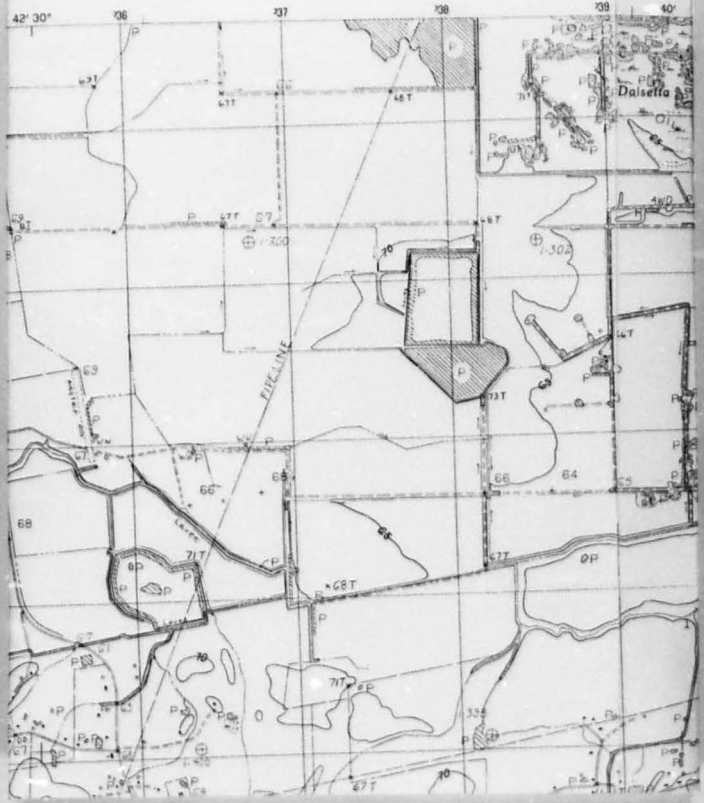

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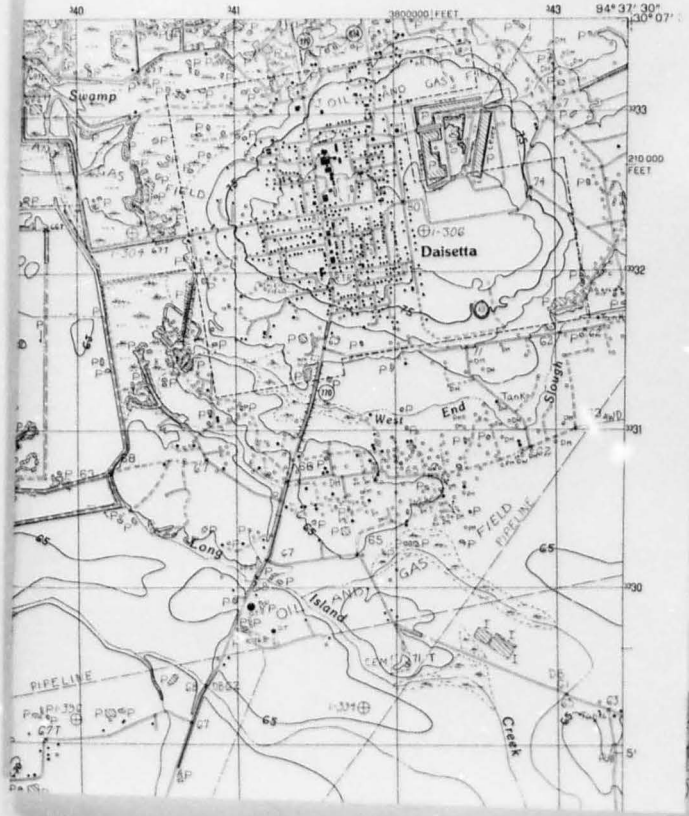

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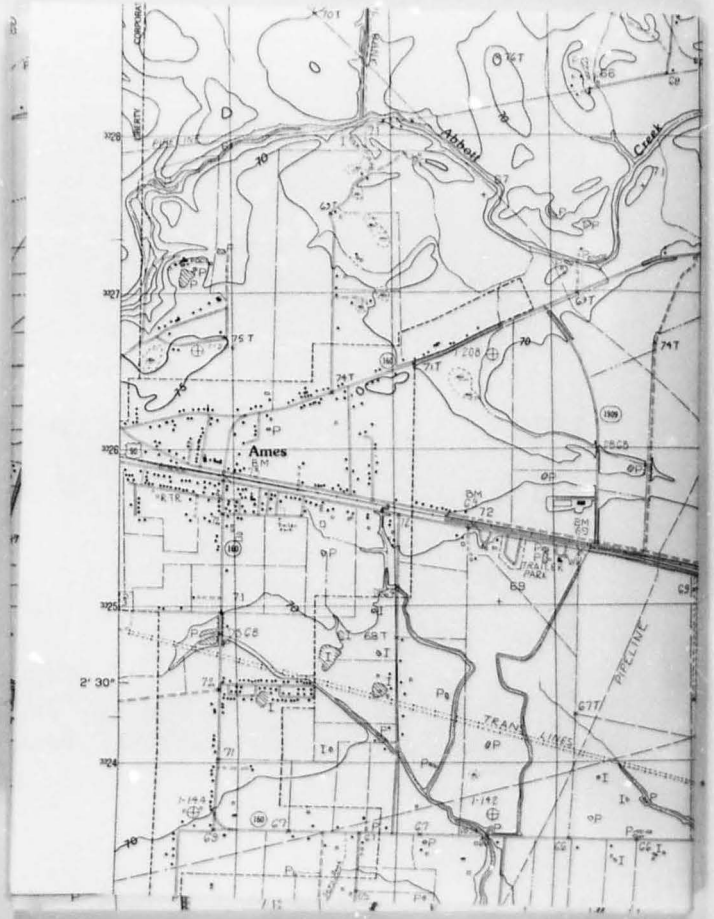

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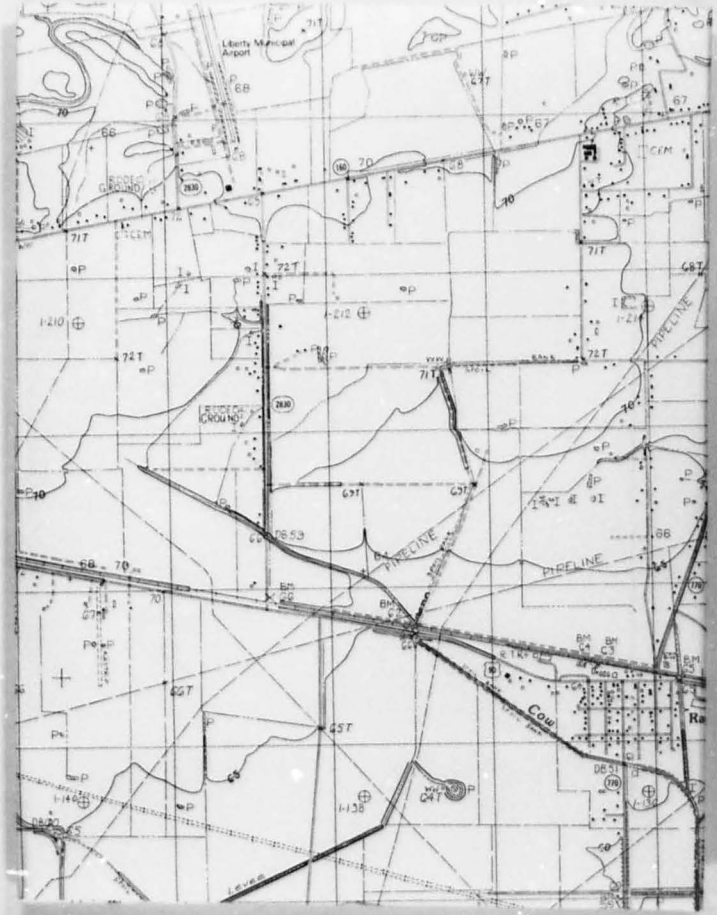

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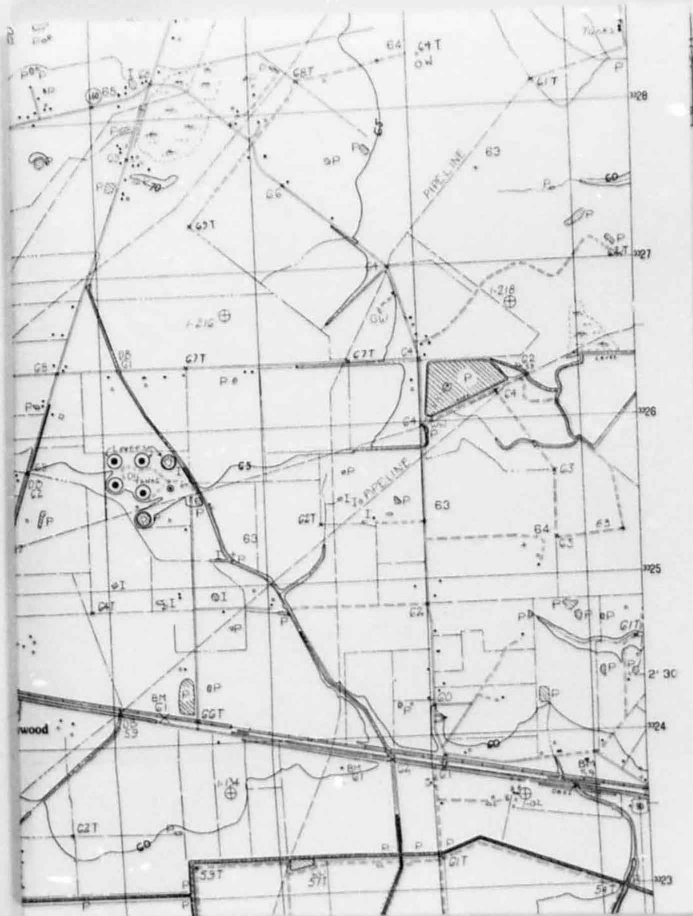

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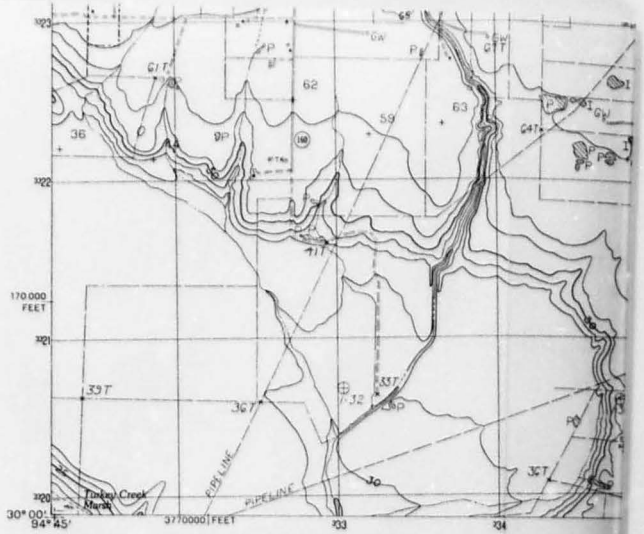

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FIELD CHECKED ..... 1977 MAP EDITED 1984
PROJECTION ..... LAMBERT CONFORMAL CONIC
GRID: 1000-METER UNIVERSAL TRANSVERSE MERCATOR ..... ZONE 15
10,000-FOOT STATE GRID TICKS ..... TEXAS, CENTRAL ZONE
UTM GRID DECLINATION ..... 0°51' WEST
1984 MAGNETIC NORTH DECLINATION ..... 5°30' EAST
VERTICAL DATUM ..... NATIONAL GEODETIC VERTICAL DATUM OF 1929
HORIZONTAL DATUM ..... 1927 NORTH AMERICAN DATUM

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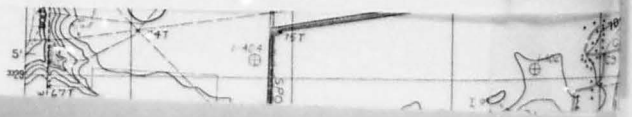

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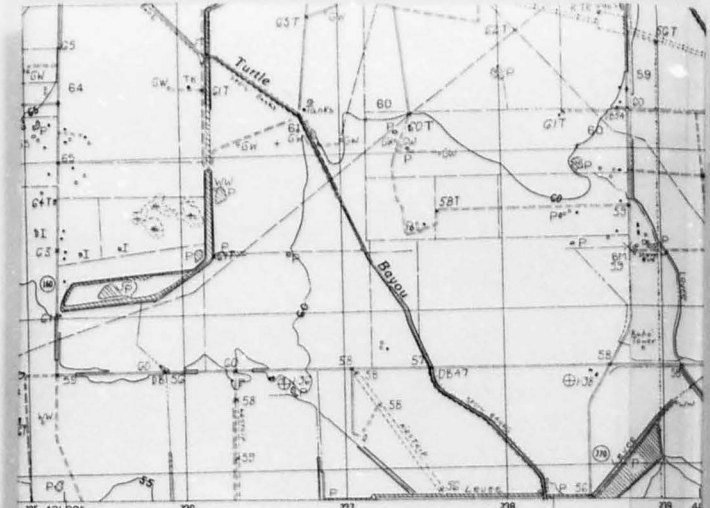

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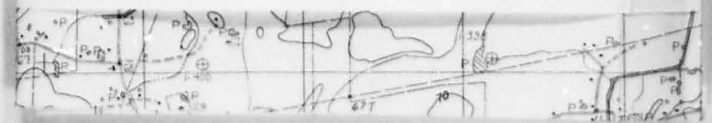

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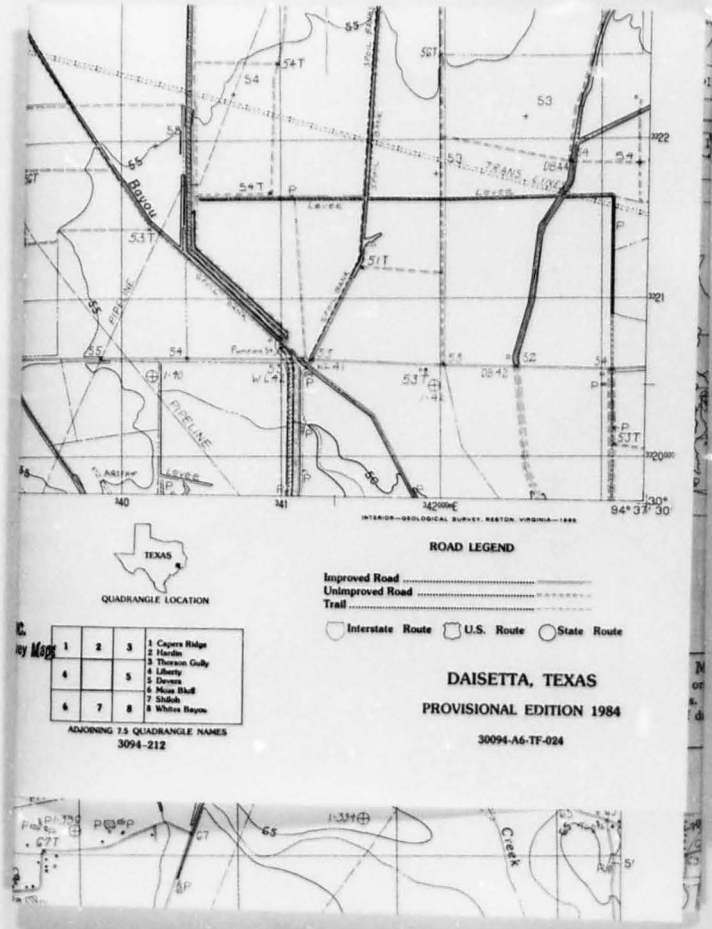

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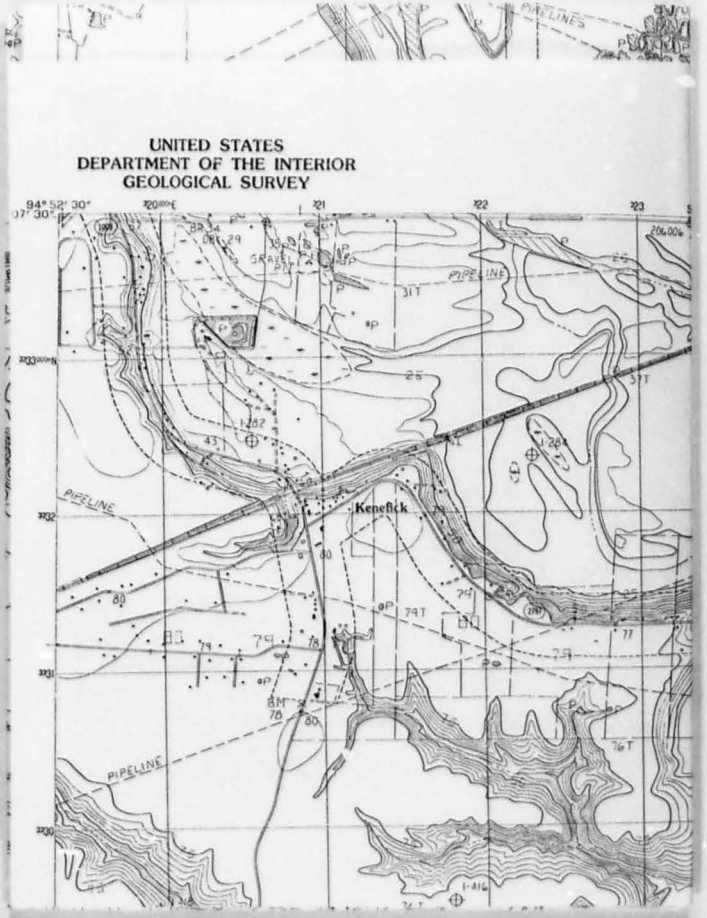

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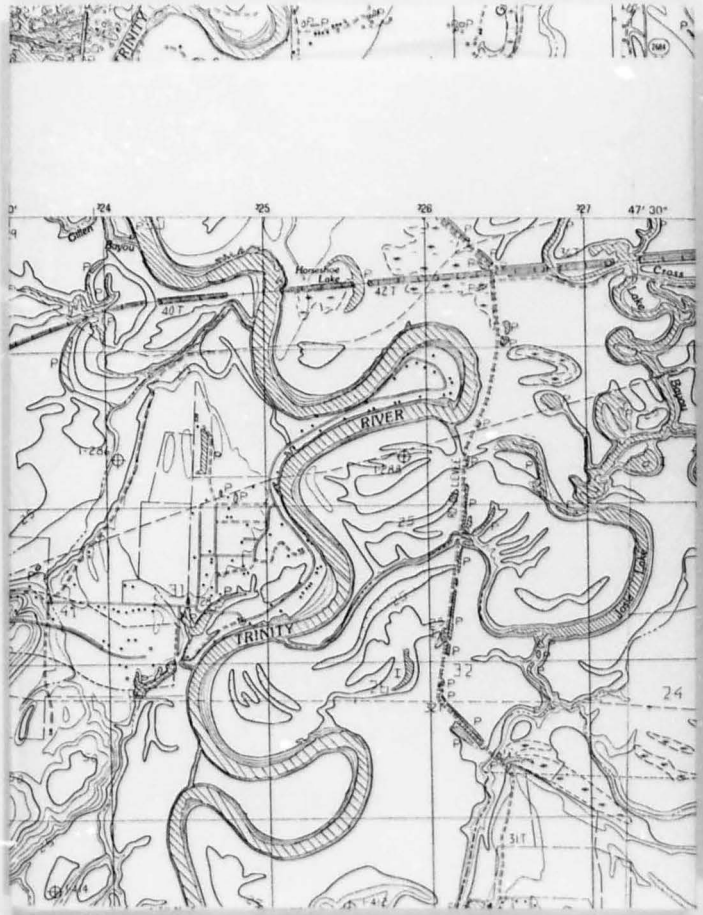

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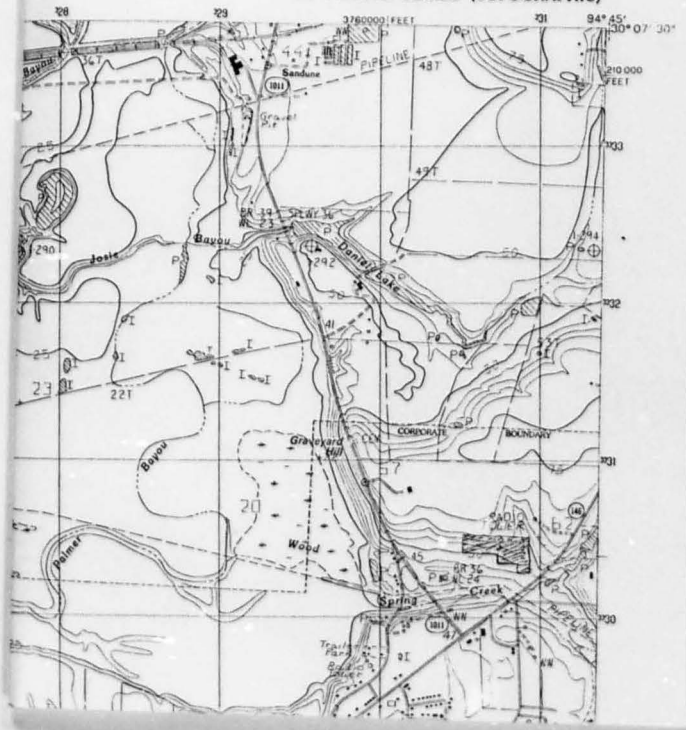

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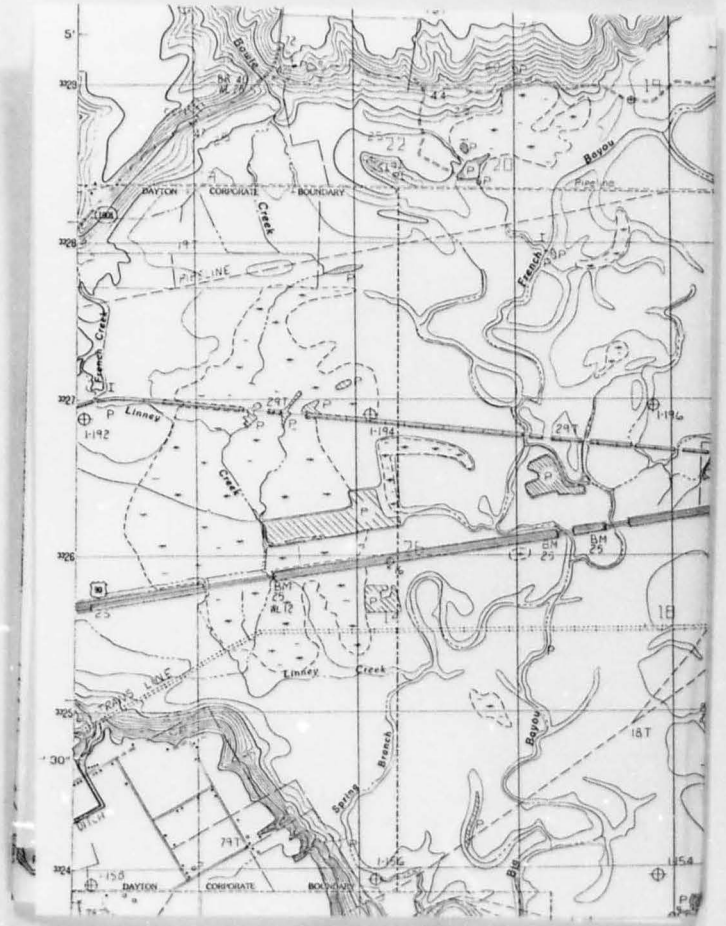

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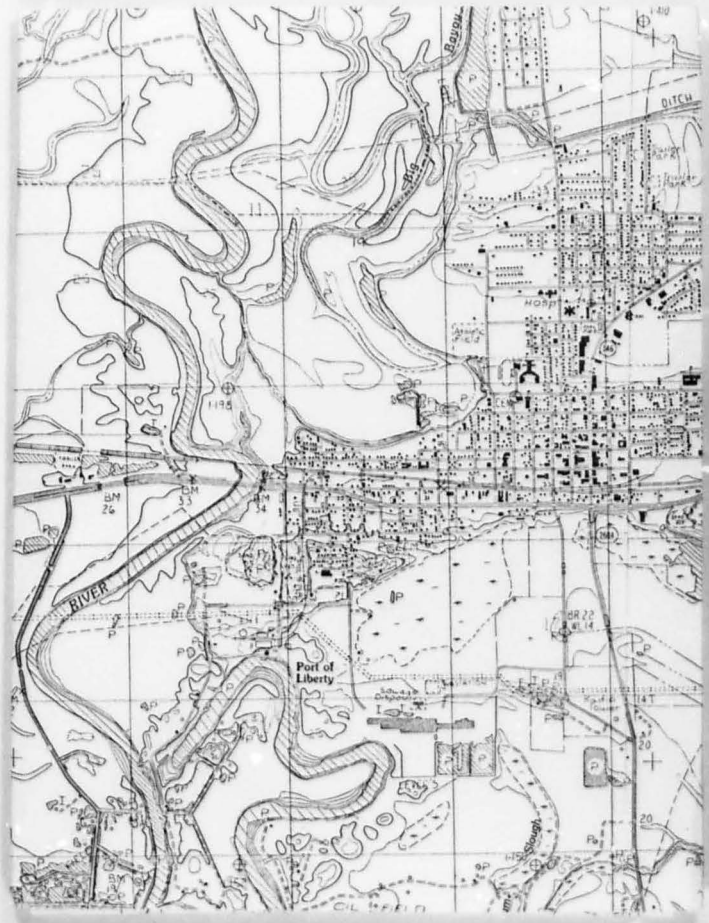

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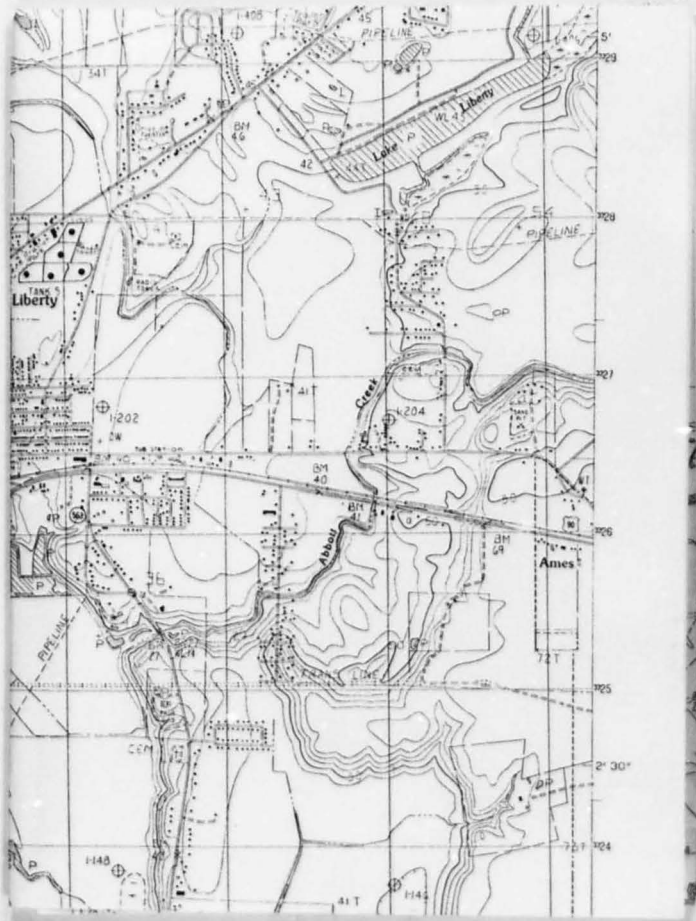

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FIELD CHECKED 1977	MAP EDITED 1984
PROJECTION	LAMBERT CONFORMAL CONIC
GRID: 1000-METER UNIVERSAL TRANSVERSE MERCATOR	ZONE 15
10,000-FOOT STATE GRID TICKS	TEXAS, CENTRAL ZONE
UTM GRID DECLINATION	0°54' WEST
1984 MAGNETIC NORTH DECLINATION	8°30' EAST
VERTICAL DATUM	NATIONAL GEODETIC VERTICAL DATUM OF 1929
HORIZONTAL DATUM	1927 NORTH AMERICAN DATUM

To place on the predicted North American Datum of 1983, move the projection lines as shown by dashed corner ticks (19 meters north and 20 meter. east)

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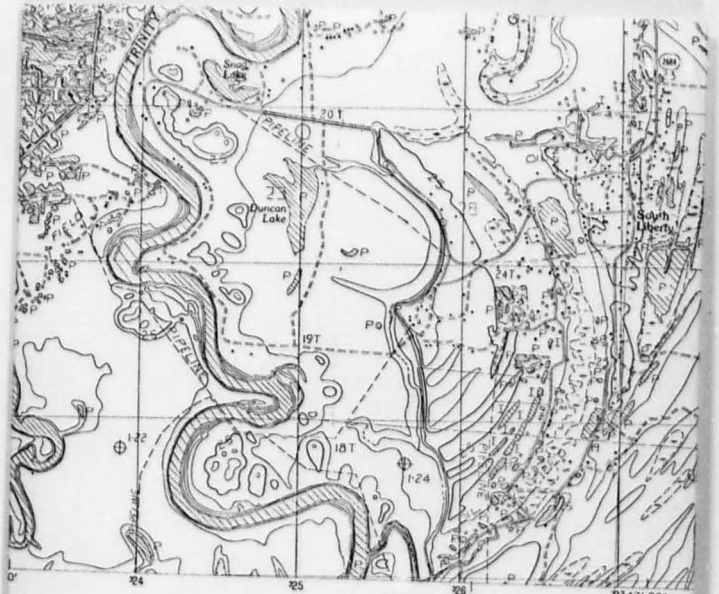

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TEXAS

QUADRANGLE LOCATION

1	2	3	1 Simmons Bottom 2 Capers Ridge 3 Hardin
4		5	4 Dayton 5 Daisetta
6	7	8	6 Sheeks 7 Mont Bluff 8 Shiloh

ADJOINING 7.5 QUADRANGLE NAMES

3094-221

ROAD LEGEND

Improved Road .....
Unimproved Road .....
Trail .....

Interstate Route U.S. Route State Route

LIBERTY, TEXAS

PROVISIONAL EDITION 1984

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KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF LIBERTY I

That I, L. A. Chapman, Trustee, of Liberty County, Texas, for and in consideration of the sum of TEN AND NO/100 ($10.00) DOLLARS and other good, valuable and sufficient consideration to me in hand paid by H. C. McCarty, Jr., the receipt and sufficiency of which are hereby acknowledged, and for the further consideration that H. C. McCarty, Jr., does hereby assume and promise to pay, according to the terms thereof, all principal and interest now remaining unpaid on that one (1) certain Real Estate Lien Note in the original principal sum of NINETEEN THOUSAND FOUR HUNDRED FIFTY AND NO/100 ($19,450.00) DOLLARS, dated June 11, 1973, executed by L. A. Chapman, Trustee, and payable to the order of Liberty Industrial Foundation, Inc., and secured by a Vendor's Lien retained in deed dated June 11, 1973, recorded in Volume 723, Page 923, of the Deed Records of Liberty County, Texas, and additionally secured by a Deed of Trust Lien dated June 11, 1973, to Thos. A. Wheat, Trustee, recorded in Volume 193, Page 646, of the Deed of Trust Records of Liberty County, Texas, upon which note there now remains unpaid the principal sum of NINETEEN THOUSAND FOUR HUNDRED FIFTY AND NO/100 ($19,450.00) DOLLARS, together with accrued interest thereon to date hereof, and H. C. McCarty, Jr., does also hereby assume and promise to keep and perform all covenants and obligations of L. A. Chapman, Trustee, set forth in said Note, Deed and Deed of Trust, have, subject to the reservations, exceptions, conditions and covenants herein set forth, GRANTED, SOLD and CONVEYED, and by these presents do, subject to the reservations, exceptions, conditions and covenants herein set forth, GRANT, SELL and CONVEY unto H. C. McCarty, Jr., of Liberty County, Texas, all of the following described property located in Liberty County, Texas, to wit:

All those certain lots, tracts or parcels of land in the George Orr League, Abstract No. 91, Liberty County, Texas, being out of and a part of the Liberty Industrial Foundation 38.520 acre tract in said League as described in deed dated May 12, 1970, recorded in Vol. 662, Page 125 of the Deed Records of Liberty

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County, Texas, and bieng more particularly described by metes and bounds as follows, to wit:

FIRST TRACT: A tract of land containing 2.750 acres, being part of and out of the above mentioned 38.520 acre tract, being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8" iron rod on the west line of the above mentioned 38.250 acre tract and the south margin of State Highway 146 for the northwest corner of the tract herein described;

THENCE N 50 degrees 37' 45" E, 279.41 feet along and with the south margin of State Highway 146, to a 5/8" iron rod set thereon for the northeast corner of the tract herein described;

THENCE S 3 degrees 16' 36" E, 614.67 feet to a 5/8" iron rod set for the southeast corner of the tract herein described;

THENCE S 86 degrees 43' 24" W 225.00 feet to a 5/8" iron rod set on the west line of the above mentioned 38.520 acre tract and the southwest corner of the tract herein described;

THENCE N 3 degrees 16' 36" W, 450.06 feet along and with the west line of the 38.520 acre tract to the Place of Beginning and containing in all 2.750 acres of land, more or less.

SECOND TRACT: A tract of land containing 18.955 acres of land, being part of and out of the Liberty Industrial Foundation 38.520 acre tract in said League, being more particularly described by metes and bounds as follows, to wit:

BEGINNING at the southwest corner of the aforementioned 38.520 acre tract, a 2" iron pipe for same from which a 10" Sweet Gum, X marked bears S 60 degrees E. 30.3 feet, said iron pipe also being the southwest corner of the tract herein described;

THENCE N 3 degrees 16' 36" W, 1251.55 feet along and with the west line of said 38.520 acre tract to a 5/8" iron rod set thereon for the northwest corner of the tract herein described;

THENCE N 86 degrees 43' 24" E, 225.00 feet along and with the south line of said First Tract, for the southeast corner thereof;

THENCE S 3 degrees 16' 36" E 256.65 feet along and with the west margin of a 60 foot road to a 5/8" iron rod set for an intermediate corner of the tract herein described;

THENCE N 86 degrees 43' 24" E, 526.61 feet to a 5/8" iron rod set on the west margin of County Road ROW for the most southern northeast corner of the tract herein described;

THENCE S 2 degrees 57' 30" E, 1045.71 feet along and with the west margin of said County Road to a 5/8" iron rod set on the south line of the aforementioned 38.520 acre tract;

THENCE S 87 degrees 58' 59" W, 207.99 feet along and with the south line of said 38.520 acre tract to a 3/4" iron rod thereon for an intermediate corner of same and an intermediate corner of the tract herein described from which a 16" Elm marked X bears S 89 degrees W, 9.00 feet and a 10 Red Oak marked X bears S 40 degrees W, 22.6 feet, said 3/4" iron rod also being the most eastern northeast corner of the E. B. Pickett, Jr. 67 acre tract;

THENCE N 88 degrees 22' 1" W, 540.09 feet along and with the south line of the aforementioned 38.520 acre tract, same being the most eastern north line of said E. B. Pickett, Jr. 67 acre tract to the Place of Beginning and containing in all 18.955 acres of land, more or less.

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The above described property is herein conveyed subject, however, to the restrictions, reservations, easements, and other pertinent stipulations affecting same of record in the Deed Records of Liberty County, Texas, and all mineral and/or royalty reservations made by my predecessors in title.

TO HAVE AND TO HOLD the above described premises, subject to said reservations, exceptions, conditions and covenants above set forth, together with all and singular the rights and appurtenances thereto in anywise belonging, unto the said H. C. McCarty, Jr., his heirs, and assigns forever; and I do hereby bind myself, my heirs, executors and administrators to WARRANT and FOREVER DEFEND all and singular the said property unto the said H. C. McCarty, Jr., his heirs and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

WITNESS MY HAND this 8 day of April, A. D. 1974.

L. A. Chapman

L. A. Chapman, Trustee

THE STATE OF TEXAS I
COUNTY OF LIBERTY I

BEFORE ME, the undersigned authority, on this day personally appeared L. A. Chapman, Trustee, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 8 day of April, A. D. 1974.

Ruby Robbins

Notary Public, Liberty County, Texas

FILED FOR RECORD
This the 9th day of July
A.D. 19 74 at 1:25 O'clock P M.
LELA MAE CATCHINGS
County Clerk, Liberty County, Texas
By Shelley Friend Deputy

STATE OF TEXAS I
COUNTY OF LIBERTY I

I, LELA MAE CATCHINGS, hereby certify that this instrument was filed on the date and at the time stamped hereon by me; and was duly RECORDED, in the Volume and Page of the named RECORDS of Liberty County, Texas, as stamped hereon by me, on

JUL 10 1974

COUNTY CLERK
LIBERTY COUNTY, TEXAS

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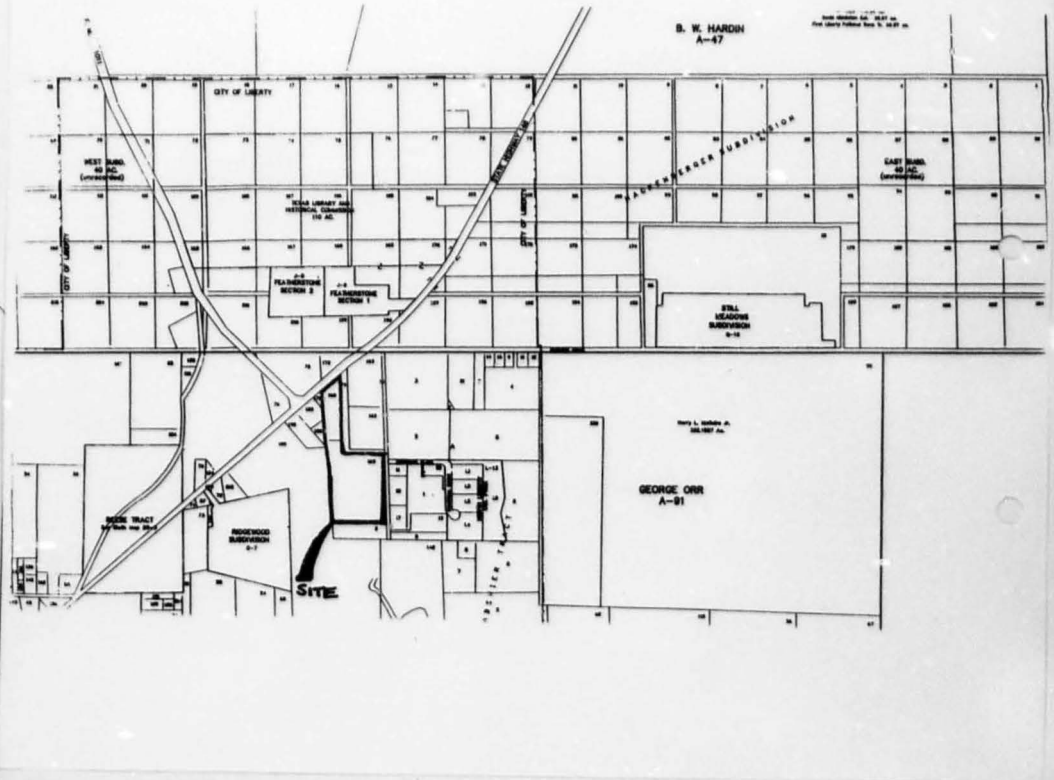

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REFERENCE 4

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE SUITE 1200
DALLAS, TEXAS 75202-2733

12 January 1993

URGENT LEGAL MATTER - PROMPT REPLY NECESSARY

CERTIFIED MAIL/RETURN RECEIPT REQUESTED - **P 110 204 265**

EPA I.D. NO.: TXD982549446

Ms. Judy Walker
Ward McCarty, Inc.
P. O. Box 788
Liberty, TX 77575

RE: EPA Preliminary Assessment
Site Access Request

Dear Ms. Walker:

The purpose of this letter is to request you to voluntarily permit the U.S. Environmental Protection Agency (EPA), and parties authorized by EPA, including but not limited to Roy F. Weston, Inc., (WESTON®), (Contract No. 68-W9-0015), access to Ward McCarty, Inc., (located at 4408 N. Main, Liberty, Texas 77575), so that EPA can enforce the provisions of the Resource Conservation and Recovery Act (RCRA), as amended, 42 USC, Sections 6901-6992k, and, pursuant to Section 104(e) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), as amended, copy pertinent documents or records, inspect the site, and obtain samples of any suspected hazardous substance or pollutant or contaminant found on-site.

Specifically, WESTON has been requested by the EPA, Region 6 to conduct a Preliminary Assessment (PA) of the above-named site to assess the degree of risk to the public health, welfare, and environment related to hazardous substances, pollutants or contaminants that may be present at the site. Based on file information, EPA finds it necessary to perform this PA pursuant to 40 CFR 300.400 Subpart E.

Section 3007 of RCRA, 42 U.S.C. Section 6927, authorizes EPA to require information relating to hazardous waste from any person who generates, stores, treats, transports, disposes of, or otherwise handles or has handled hazardous wastes. Section 104(e) of CERCLA, 42 U.S.C. Section 9604(e), authorizes EPA to require any person who has or may have information relating to any of the following to furnish information or documents relating to:

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LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- **ZONE A** — No base flood elevations determined.
- **ZONE AE** — Base flood elevations determined.
- **ZONE AH** — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- **ZONE AO** — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE A99** — To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- **ZONE V** — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- **ZONE VE** — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- **ZONE X** — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- **ZONE X** — Areas determined to be outside 500-year flood plain.
- **ZONE D** — Areas in which flood hazards are undetermined.

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- 513 — Base Flood Elevation Line; Elevation in Feet*
- D — D — Cross Section Line
- (EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone*
- RM 7$_X$ — Elevation Reference Mark
- •M1.5 — River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside special flood hazard areas. The coastal flooding elevations shown may differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Elevation reference marks are described in the Flood Insurance Study Report.

Coastal base flood elevations apply only landward of 0.0 NGVD.

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REFERENCE 19

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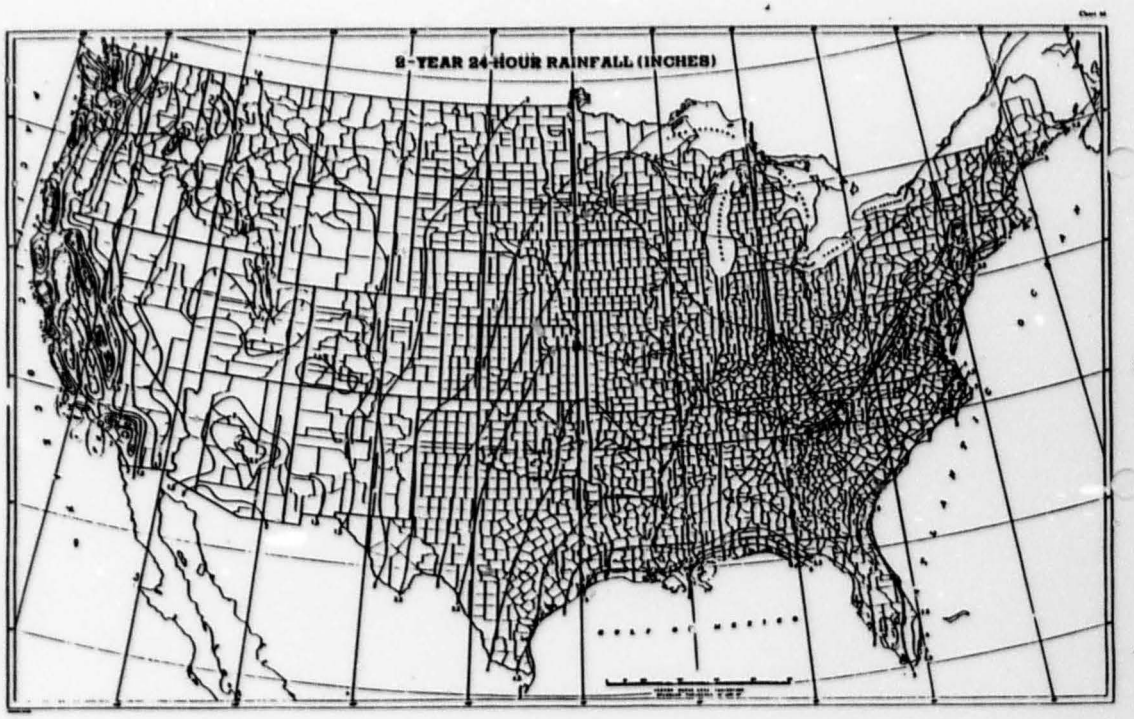

Figure 3-9. Twenty Four-Hour Rainfall Depths. Taken from USDC, 1961.

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REFERENCE 20

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OVERSIZE DOCUMENT

The page that occupies this position in the paper document is:

Oversized document number:

TXD982549446
SFSA Vol. 02

on the roll of 35mm film.

Titled:

R6-HS-R-TXM004

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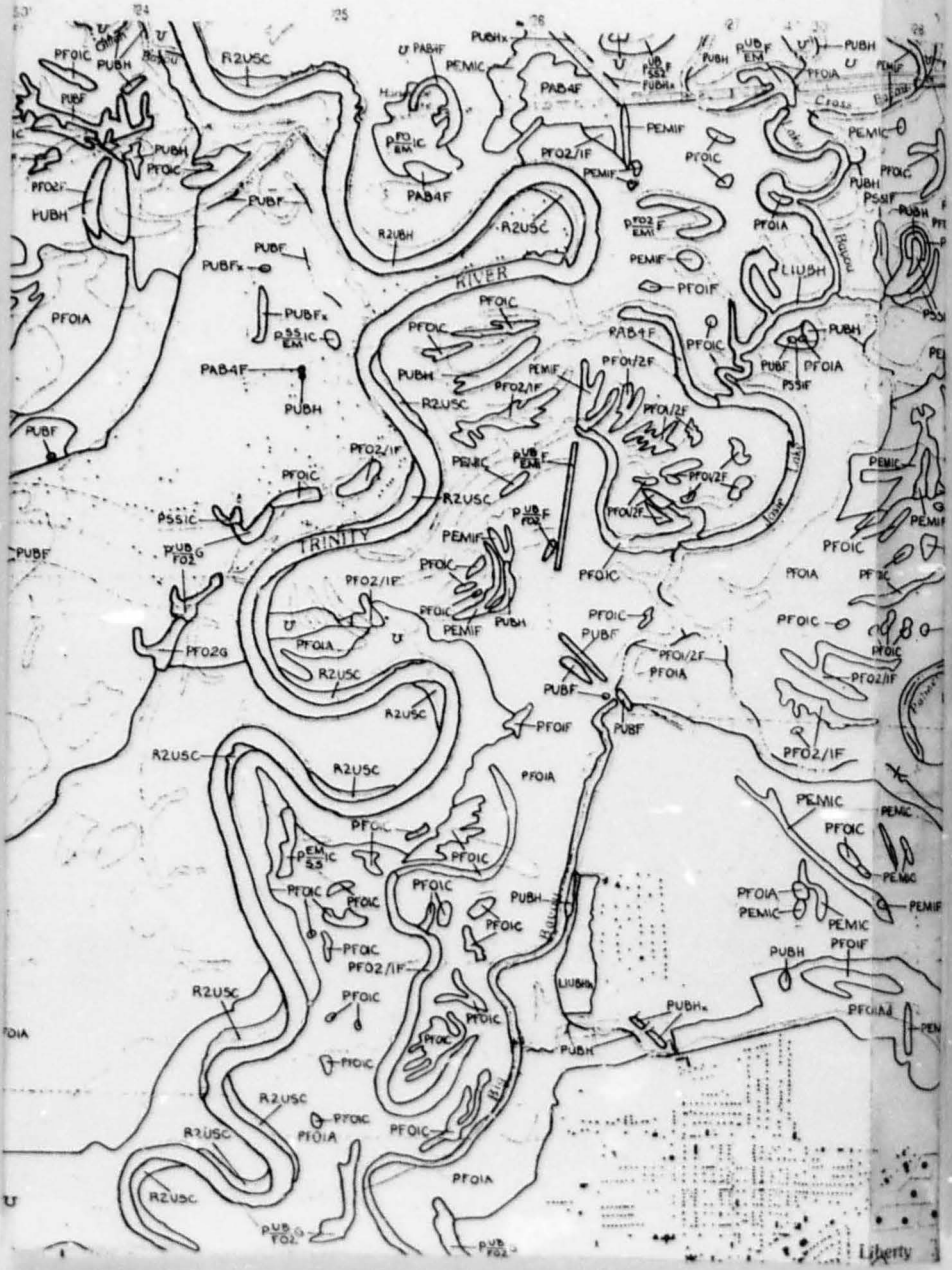
NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR



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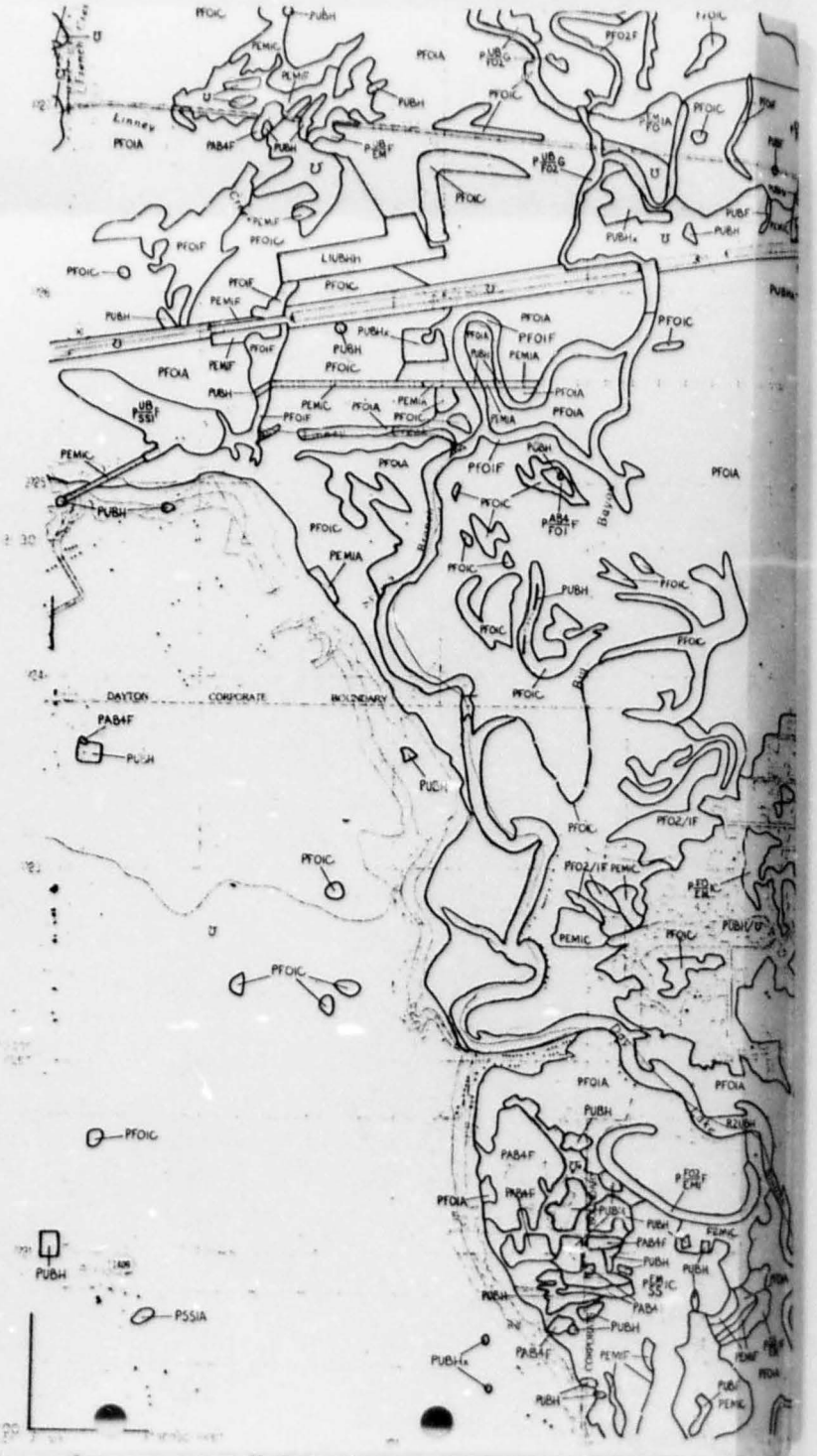

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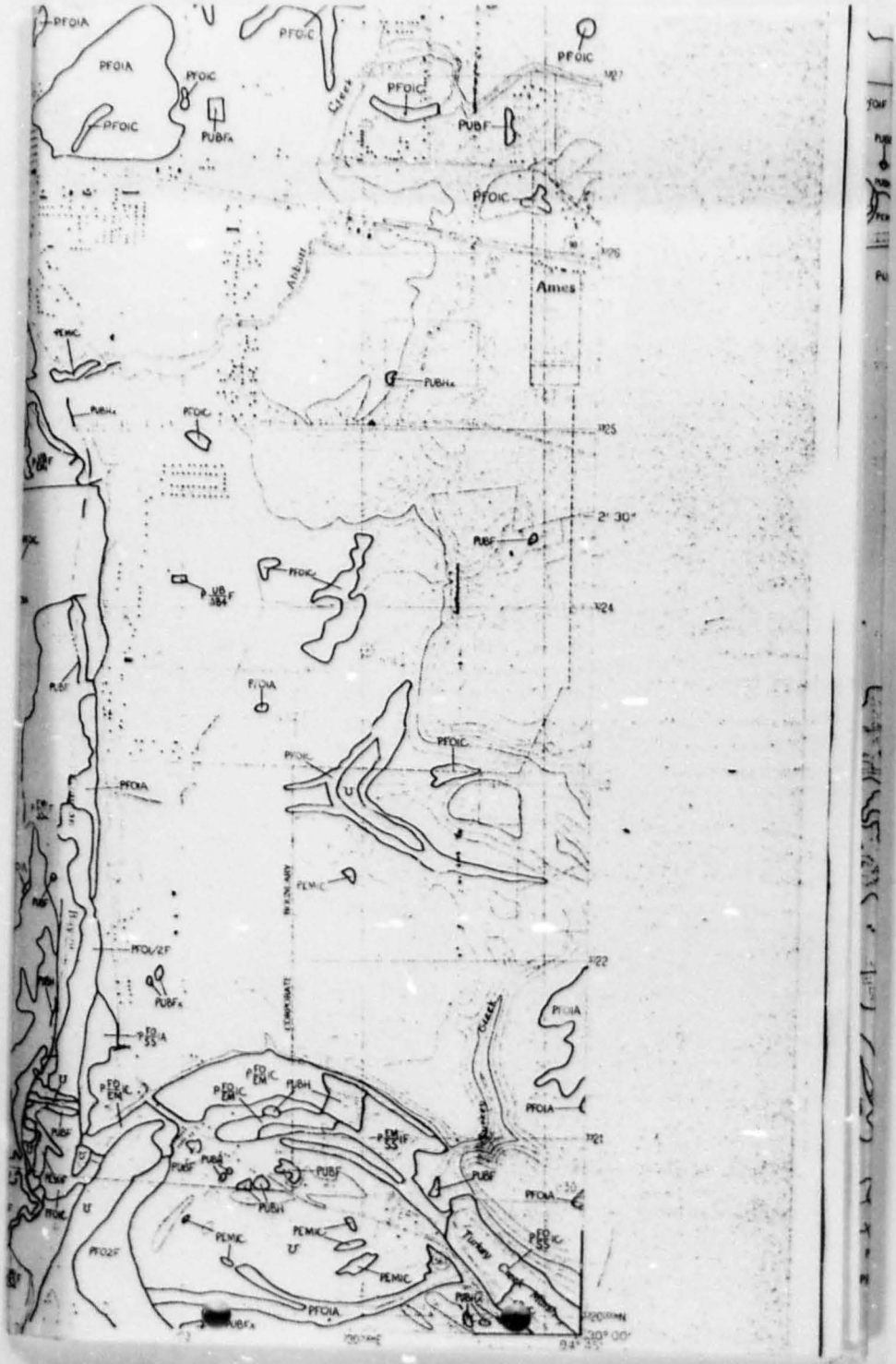

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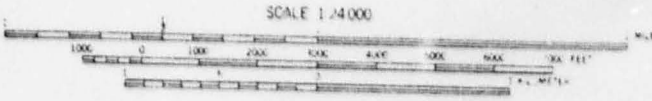

1 acre

10 acres

20 acres

ACREAGE GUIDE

Other information including a narrative report concerning the wetland resources depicted on this document may be available. For information, contact:

Regional Director (ARDE) Region II
U.S. Fish and Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

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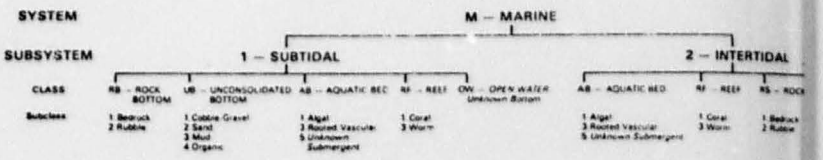
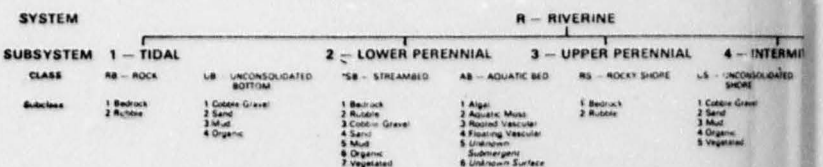
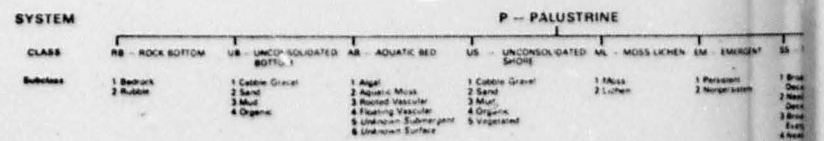




*STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS and comprises the only CLASS in the INTERMITTENT SUBSYSTEM
**EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS. The remaining CLASSES are found in all SUBSYSTEMS



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NOTE

cument was prepared primarily by stereoscopic f high altitude aerial photographs. Wetlands were on the photographs based on vegetation, visible , and geography in accordance with **Classifica- Wetlands and Deepwater Habitats of the United WS/OBS - 79/31 December 1979)**. The aerial hs typically reflect conditions during the specific eason when they were taken. In addition, there on of error inherent in the use of the aerial hs. Thus, a detailed on the ground and historical f a single site may result in a revision of the oundaries established through photographic ion. In addition, some small wetlands and those by dense forest cover may not be included on hoto.

State and local regulatory agencies with jurisdic- wetlands may define and describe wetlands in a anner than that used in this inventory. There is , in either the design or products of this inven- fine the limits of proprietary jurisdiction of any tate or local government or to establish the al scope of the regulatory programs of govern- cies. **Persons intending to engage in activities modifications within or adjacent to wetland ld seek the advice of appropriate Federal, State encies concerning specified agency regulatory** and proprietary jurisdictions that may affect **ities.**

SYMBOLOGY EXAMPLE

NOTES TO THE USER

- Wetlands which have been on the map by an asterisk
- Additions or corrections to displayed on this map are information to the address
- Subsystems, Classes, Sub in *Italics* were developed s WETLANDS INVENTORY
- Some areas designated as (INTERMITTENT STREAMS tion of wetland
- This map uses the class U On earlier NWI maps that Bar (BB), or Flat (FL). Subcl versions

AERIAL PHOT

DATE 1 82
SCALE 1:58 000
TYPE CIR

U – Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions

E – ESTUARINE

1 – SUBTIDAL

SHORE | US UNCONSOLIDATED SHORE | RB ROCK BOTTOM | UB UNCONSOLIDATED BOTTOM | AB AQUATIC BED | RF REEF | OW OPEN WATER Unknown Bottom | AB AQUATIC BED | RF REEF | SB

US: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic
RB: 1 Bedrock; 2 Rubble
UB: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic
AB: 1 Algal; 3 Rooted Vascular; 4 Floating Vascular; 5 Unknown Submergent; 6 Unknown Surface
RF: 2 Mollusk; 3 Worm
AB: 1 Algal; 3 Rooted Vascular; 4 Floating Vascular; 5 Unknown Submergent; 6 Unknown Surface
RF: 2 Mollusk; 3 Worm
SB: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic

L – LACUSTRINE

1 – LIMNETIC

TENT | **5 – UNKNOWN PERENNIAL**

EM – EMERGENT | OW OPEN WATER Unknown Bottom | RB ROCK BOTTOM | UB UNCONSOLIDATED BOTTOM | AB AQUATIC BED | OW OPEN WATER Unknown Bottom | RB ROCK BOTTOM | UB UNCONSOLIDATED BOTTOM

2 Nonpersistent
RB: 1 Bedrock; 2 Rubble
UB: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic
AB: 1 Algal; 2 Aquatic Moss; 3 Rooted Vascular; 4 Floating Vascular; 5 Unknown Submergent; 6 Unknown Surface
RB: 1 Bedrock; 2 Rubble
UB: 1 Cobble-Gravel; 2 Sand; 3 Mud; 4 Organic

SHRUB | FO FORESTED | OW OPEN WATER Unknown Bottom

Leaved: 1 Broad Leaved Deciduous; 2 Needle Leaved Deciduous; 3 Broad Leaved Evergreen; 4 Needle Leaved Evergreen; 5 Dead; 6 Deciduous; 7 Evergreen

MODIFIER

In order to more adequately describe wetland and deepwater habi
tion or special modifiers may be applied at the class or lower level in the hierarch

WATER REGIME

Non-Tidal

A Temporarily Flooded
B Saturated
C Seasonally Flooded
D Seasonally Flooded/ well Drained
E Seasonally Flooded/ Saturated
F Semipermanently Flooded
G Intermittently Exposed
H Permanently Flooded
J Intermittently Flooded
K Artificially Flooded
W Intermittently Flooded/ Temporary
Y Saturated/ Semipermanent/ Seasonal
Z Intermittently Exposed/ Permanent
U Unknown

Tidal

K Artificially Flooded
L Subtidal
M Irregularly Exposed
N Regularly Flooded
P Irregularly Flooded
*S Temporary Tidal
*R Seasonal Tidal
*T Semipermanent Tidal
*V Permanent Tidal
U Unknown

*These water regimes are only used in tidally influenced freshwater systems

Coastal Halinity

1 Hyperhaline
2 Euhaline
3 Mixohaline (Brackish)
4 Polyhaline
5 Mesohaline
6 Oligohaline
0 Fresh

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LIBERTY, [illegible]EXAS

field examined are indicated
*)
the wetlands information
olicited. Please forward such
indicated.
lasses, and Water Regimes
pecifically for NATIONAL
apping.
R4SB, R4SBW, OR R4SBJ
may not meet the defini-

consolidated Shore (US)
lass was designated Beach
sses remain the same in both

U.S. DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

Prepared by National Wetlands Inventory

1987

OGRAPHY

DATE ____________

SCALE ____________

TYPE ____________

SYSTEM

2 – INTERTIDAL — SUBSYSTEM

CLASS	Subclass
...AMBED	...ave
RS ROCKY SHORE	1 Bedrock 2 Rubble
US UNCONSOLIDATED SHORE	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic
EM EMERGENT	1 Persistent 2 Nonpersistent
SS SCRUB SHRUB	1 Broad Leaved Deciduous 2 Needle Leaved Deciduous 3 Broad Leaved Evergreen 4 Needle Leaved Evergreen 5 Dead 6 *Deciduous* 7 *Evergreen*
FO FORESTED	1 Broad Leaved Deciduous 2 Needle Leaved Deciduous 3 Broad Leaved Evergreen 4 Needle Leaved Evergreen 5 Dead 6 *Deciduous* 7 *Evergreen*

SYSTEM

2 – LITTORAL — SUBSYSTEM

CLASS	Subclass
AB AQUATIC BED	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface
RS ROCKY SHORE	1 Bedrock 2 Rubble
US UNCONSOLIDATED SHORE	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated
EM EMERGENT	2 Nonpersistent
OW *OPEN WATER Unknown Bottom*	

...s one or more of the water regime, water chemistry
... The farmed modifier may also be applied to the ecological system.

...ATER CHEMISTRY		SOIL	SPECIAL MODIFIERS	
Inland Salinity	**pH Modifiers for all Fresh Water**			
7 Hypersaline 8 Eusaline 9 Mixosaline 0 Fresh	a Acid t Circumneutral i Alkaline	g Organic n Mineral	b *Beaver* d *Partially Drained/Ditched* f *Farmed*	h *Diked/Impounded* r *Artificial Substrate* s *Spoil* x *Excavated*

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LIBERTY COUNTY

Status	Common Name	Scientific Name
	LISTED SPECIES	
Amphibians:		
E	Houston toad (H)	Bufo houstonensis
Birds:		
E	Bald eagle (N)	Haliaeetus leucocephalus
E	Red-cockaded woodpecker (P)	Picoides borealis
	CANDIDATE SPECIES	
Plants:		
C2	Marshelder dodder	Cuscuta attenuata
C2	Scarlet catchfly	Silene subciliata
Reptiles:		
C2	Alligator snapping turtle	Macroclemys temmincki
C2	Texas diamondback terrapin	Malaclemys terrapin littoralis
C2	Texas horned lizard	Phrynosoma cornutum
Birds:		
C2	Bachman's sparrow	Aimophila aestivalis
C2	Henslow's sparrow	Ammodramus henslowii
C2	Long-billed curlew	Numenius americanus
Mammals:		
C2	Big Thicket hog-nosed skunk	Conepatus mesoleucus telmalestes
C2	Plains spotted skunk	Spilogale putorius interrupta
C2	Southeastern myotis (bat)	Myotis austroriparius

E= Endangered
T= Threatened
C2= Candidate with some information on hand for listing
H= Historical occurrence
N= Nesting activity
P= Potential resident (if habitat exists)

May 1, 1992

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STATUS: Endangered (35 FR 16047; October 13, 1970) with critical habitat (43 FR 4022; January 31, 1978).

CRITICAL HABITAT: Texas: Areas of land, water, and air space as follows: (1) in Bastrop County, from the junction of a line corresponding to 30°12'00" N. and Texas State Highway 95 east along a line corresponding to 30°12'00" N. to where it intersects a line corresponding to 97°7'30" W. and south along a line corresponding to 97°7'30" W. to where it intersects the Colorado River, west and northwest along the north bank of the Colorado River to the due southward extension of Texas State Highway 95, and north along that extension and Texas State Highway 95 to where it intersects a line corresponding to 30°12'00" N. and (2) Burleson County, a circular area with a 1-mile radius, the center being the north entrance to Lake Woodrow from Texas FM 2000.

DESCRIPTION: A small (2-3.25 inches long) toad similar in appearance to the American toad. General coloration varies from light brown to gray or purplish gray, sometimes with green patches. Pale ventral surfaces often have small, dark spots. Males have dark throat.

HABITAT: Requires deep sand or loamy sands for burrows/aestivation, and breeds in ephemeral rain pools, flooded fields, and permanent ponds. Males call from shallow water or small mounds of soil or grass surrounded by water. Males also call from woods in wooded habitat within 100 m radius of breeding sites. Pairs sometimes come to breeding sites already in amplexus (copulatory embrace of frogs and toads).

DISTRIBUTION:

Present: Austin, Bastrop, Burleson, Colorado, Freestone, Lavaca, Lee (presumed but not confirmed), Leon, Milam, and Robertson Counties, in Texas (Freestone, Lavaca, Leon, Milam, and Robertson Counties are relatively new records).

Historic: Austin, Bastrop, Burleson, Colorado, Fort Bend, Harris, and Liberty Counties.

THREATS AND/OR REASONS FOR DECLINE: Habitat degradation/destruction caused by land use changes including agricultural and urban expansion, reduction of suitable habitat by watershed aneration, and failure to reproduce and survive during drought.

OTHER INFORMATION: Recovery plan completed in 1984. Majority of diet is insects and other invertebrates. Breeds from January to June, followed by aestivation until the next spring rains. Toads will only emerge to breed if conditions are adequate. Toads, especially first-year toadlets and juveniles, are active year-round under suitable conditions. Non-flowing pools that persist for at least 30 days are needed for breeding including egg and tadpole life stages. Toads may emerge outside of the breeding season. Recovery Plan undergoing revision.

REFERENCES:

Brown, L.E. 1975. The status of the nearly extinct Houston toad (*Bufo houstonensis*) with recommendations for its conservation. Herp. Review 6: 37-38.

Garret, J. and D.G. Barker. 1987. A Field Guide to the Reptiles and Amphibians of Texas. Texas Monthly Press, Austin, Texas. 225pp.

Hillis, D.M., A.M. Hillis, and R.F. Martin. 1984 Reproductive ecology and hybridization of the endangered Houston toad (*Bufo houstonensis*). J. Herp. 18: 56-72.

Price, A. 1990. Houston Toad Status Report. Prepared for the U.S. Fish and Wildlife Service, Albuquerque, NM.

U.S. Fish and Wildlife Service (USFWS). 1984. Houston Toad Recovery Plan. USFWS, Endangered Species Office, Albuquerque, NM.

REV. DATE 8/92

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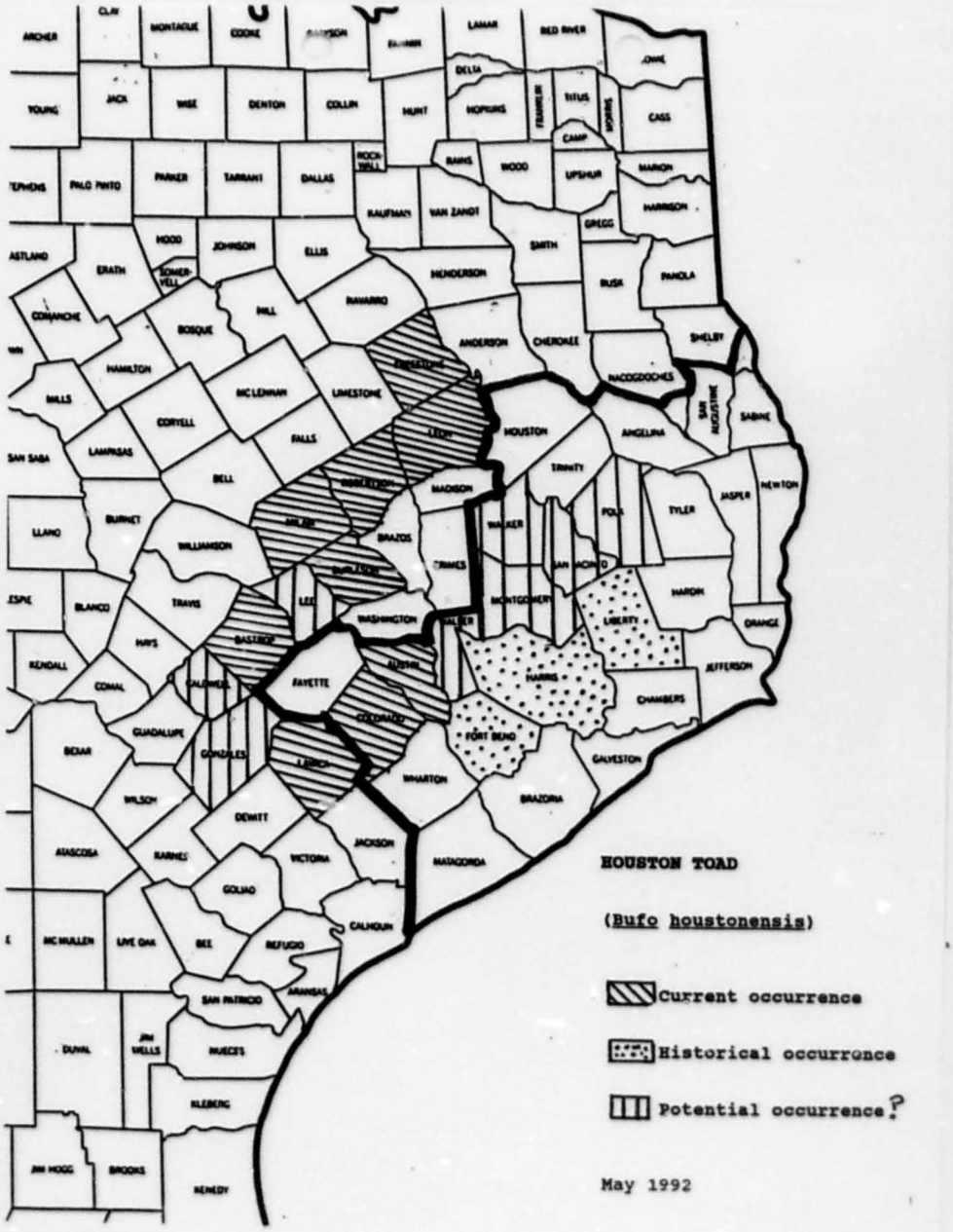

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BALD EAGLE (Haliaeetus leucocephalus)

(August 1992)

STATUS: Listed as endangered (1967;1978) without critical habitat in all but five of the contiguous 48 states (listed as threatened in Washington, Oregon, Minnesota, Wisconsin, and Michigan). The Southeastern States Bald Eagle Recovery Plan was approved in 1983 and revised in 1989. Bald eagles are protected by a number of Federal and State laws, including the Endangered Species Act, Bald Eagle Protection Act, and Migratory Bird Treaty Act.

DESCRIPTION: Large hawk-like bird with a 6-7 feet wingspread; adults have a white head, neck, and tail; immatures are mostly dark and may be confused with golden eagles.

THREATS AND/OR REASONS FOR DECLINE: Past threats to the species include reproductive failure caused by certain pesticides, loss of riparian habitat, and unrestricted killing by humans (shooting, poisoning, and trapping). Current threats remain habitat loss and human encroachment on bald eagle nest sites. Lead poisoning is also a concern; even low levels can cause neurological dysfunction, behavioral aberrations, anemia, and increased susceptibility to disease.

HABITAT: Preferred nesting habitat in Texas is along river systems, or within 1-2 miles of some other large body of water, such as a lake or reservoir. Nests are often located in the ecotone (edge) between forest, marsh, and water. Large, tall (40-120 feet) trees are generally needed, and nests are often constructed in the dominant or codominant trees of an area (taller than general forest canopy, providing unobstructed flight path to nest). A variety of tree species are utilized for nesting. In Texas, eagles have constructed nests in loblolly pine, baldcypress, oak, cottonwood, and sycamore trees, among others. Nearby (within 0.5 miles) wetland areas are necessary for feeding. Fish is generally the primary food, but eagles in Texas also utilize waterfowl, turtles, small mammals, and carrion.

Bald eagles also occur in Texas as wintering individuals that migrate from areas north. These eagles utilize major rivers, reservoirs, and other areas of open water where fish, waterfowl, and carrion are available for food.

DISTRIBUTION:

Nesting populations are gradually increasing in Texas. In 1992, bald eagle nests were known to occur (although not all were active or successful) in Angelina, Bastrop, Bowie, Brazoria, Calhoun, Chambers, Colorado, Fannin, Fayette, Fort Bend, Goliad, Grimes, Harris, Houston, Jackson, Liberty, Matagorda, Montgomery, Polk, Refugio, Robertson, Sabine, San Augustine, San Jacinto, Shelby, Trinity, Victoria, Walker, and Wharton Counties.

Wintering populations may occur statewide, but they generally can be found from December to March around large water bodies such as the following: Lake Meredith (Hutchinson, Moore, Potter Counties), Buffalo Lake (Randall County), Lake Texoma (Grayson County), Wright-Patman Lake (Bowie County), Lake o' the Pines (Marion County), Lake Fork (Rains and Wood Counties), Lake Tawakoni (Hunt, Rains, Van Zandt Counties), Lake Whitney (Bosque and Hill Counties), Lake Fairfield (Freestone County), Toledo Bend Reservoir (Newton, Panola, Sabine, Shelby Counties), Sam Rayburn Reservoir (Angelina, Jasper, Nacogdoches, Sabine, San Augustine Counties), Lake Livingston (Polk, San Jacinto, Trinity, Walker Counties), Lake Conroe (Montgomery and Walker Counties), and Lake Buchanan (Burnet and Llano Counties).

Bald eagles may also occur throughout state as spring and fall migrants.

OTHER INFORMATION: The bald eagle nesting period in Texas is normally October to July, with peak egg-laying in December and hatching primarily in January. Young generally fledge in April after 10-12 weeks of growth, but parental care continues for another 4-6 weeks. Adults and young begin to migrate north in May, with a pair sometimes remaining within a territory all year. Adulthood is reached at 4-6 years of age. Bald eagles are vulnerable to disturbance throughout the nesting period. However, habitat management guidelines, that should minimize or avoid disturbance to nesting bald eagles, have been developed and can be requested from the U.S. Fish and Wildlife Service (FWS).

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STATUS: Endangered (35 FR 8495; June 2, 1970) without critical habitat

DESCRIPTION: A "ladder-backed" 8-inch long woodpecker with a solid black cap and nape, and prominent white cheek patches. The male has a tiny red streak behind the eye and near the ear (the cockade). Similar to the downy and hairy woodpeckers in general appearance, but the red-cockaded woodpecker has a barred back, spotted breast, and the male has red on either side of head rather than on nape.

HABITAT: Open, old-aged (60-70+ years) loblolly, shortleaf, and especially slash and longleaf pine woodlands; rarely if ever in dense woodlands. Presence of old trees with heart rot are essential for roosting and nesting sites.

DISTRIBUTION: Southeastern U.S. from North Carolina to Florida and west to eastern Texas

Present: Southeastern U.S. pine forest from North Carolina to Florida, west to Oklahoma and Texas.

Historic: Western edge of range formerly reached 34 counties in eastern Texas.

THREATS AND REASONS FOR DECLINE: Decrease in the quality and quantity of old growth forest nesting habitat, primarily due to short term rotation timber management on private and public forests and to fire suppression. Southern pine beetle infestations on National Forests have contributed to the decline of suitable red-cockaded woodpecker foraging and nesting habitat.

OTHER INFORMATION: The Recovery Plan was revised in 1985. The 1991 Red-cockaded Woodpecker pre-breeding season population in Texas was 583 birds, with 60% of these on the Sam Houston National Forest. The Interim Standards and Guidelines for Protection and Management of Red-cockaded Woodpecker Habitat within 3/4 mile of colony sites have been proposed for red-cockaded woodpecker management on National Forests. Similar guidelines for Red-cockaded Woodpecker habitat management on state and private lands are being developed. The red-cockaded woodpecker is a colonial cooperative breeder traveling in family groups (clans). The diet of the woodpecker consist mainly of insects (85%) but also includes small fruits and seeds (15%).

REFERENCES:

Ligon, J.D., P.B. Stacey, R.N. Conner, C.E. Bock, and C.S. Adkinsson. 1986. Report of the American Ornithologist Union Committee for the conservation of the Red-cockaded Woodpecker. Auk 103:848-855.

Swepston, D. 1980. Results of red-cockaded woodpecker research in Texas between 1969 and 1973. Species Report. Texas Parks and Wildlife Department, P-R Project W-103-R-9.

Thompson, R.L. (ed.). 1971. Proceedings of ecology and management of the red-cockaded woodpecker. Bureau Sport Fish and Wildlife and Tall Timbers Research Station, Tallahassee, FL.

U.S. Fish & Wildlife Service (USFWS). 1985. Red-cockaded Woodpecker Recovery Plan. USFWS, Endangered Species Office, Atlanta, GA.

REV. DATE 8/92

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THE RED-COCKADED WOODPECKER

The red-cockaded woodpecker (RCW) was once a common bird in the mature pine forests of the southeast. It lived from east Texas to Florida and north to Missouri and Maryland. Today, its range and population have been reduced through loss of habitat. Much of the original piney woods of the southeast has been cleared for agriculture or contains immature timber. This bird was placed on the Endangered Species list in 1970. National Forest lands in east Texas presently support most of the known woodpecker colonies in the state.

The RCW has a unique habit of building roost and nest cavities in live southern pines, other woodpeckers prefer dead snags. This habit is of great benefit to the dozens of other cavity dwelling animals that readily move in upon abandonment by the woodpecker.

The RCW lives in family groups called clans. A clan consists of the breeding male and female and possibly some helpers. The helpers are typically the sons of the breeding male and can be from 1 to 3 years old. Helpers assist with incubating eggs, feeding young, and excavating new cavities. The breeding male may live for several years. When he dies, one of his helper sons may inherit the status of breeding male.

The clan may have several cavity trees arranged in a cluster. The cluster of cavity trees and surrounding area is called the colony site. The clan requires a large area in which to forage for insects, spiders, etc. and may not be found in the colony site during the day. However, the clan always returns to the colony site in the evening to roost.

If you are patient, you may see a red-cockaded woodpecker in this colony site, especially around dawn or dusk. The RCW is a ladder-backed woodpecker, slightly larger than a bluebird. You will not notice any red on the head, as the name would imply. Red is found only on the male and only under the outer feathers behind the ear.

The best time of the year to observe this bird is in May or June, when nesting is taking place. During these months, birds may be observed within the colony site even during midday. Please do not disturb this endangered species, particularly during this critical period.

RED-COCKADED HABITAT

Figure 1.-Red cockaded woodpecker.

Red-cockaded woodpecker cavities are excavated in live pine trees (figure 1). Cavity trees in open, mature pine stands are preferred (figure 2). Heavy hardwood midstory tends to lead to colony site abandonment.

Figure 2.-Colony site. Note other cavity in center background.

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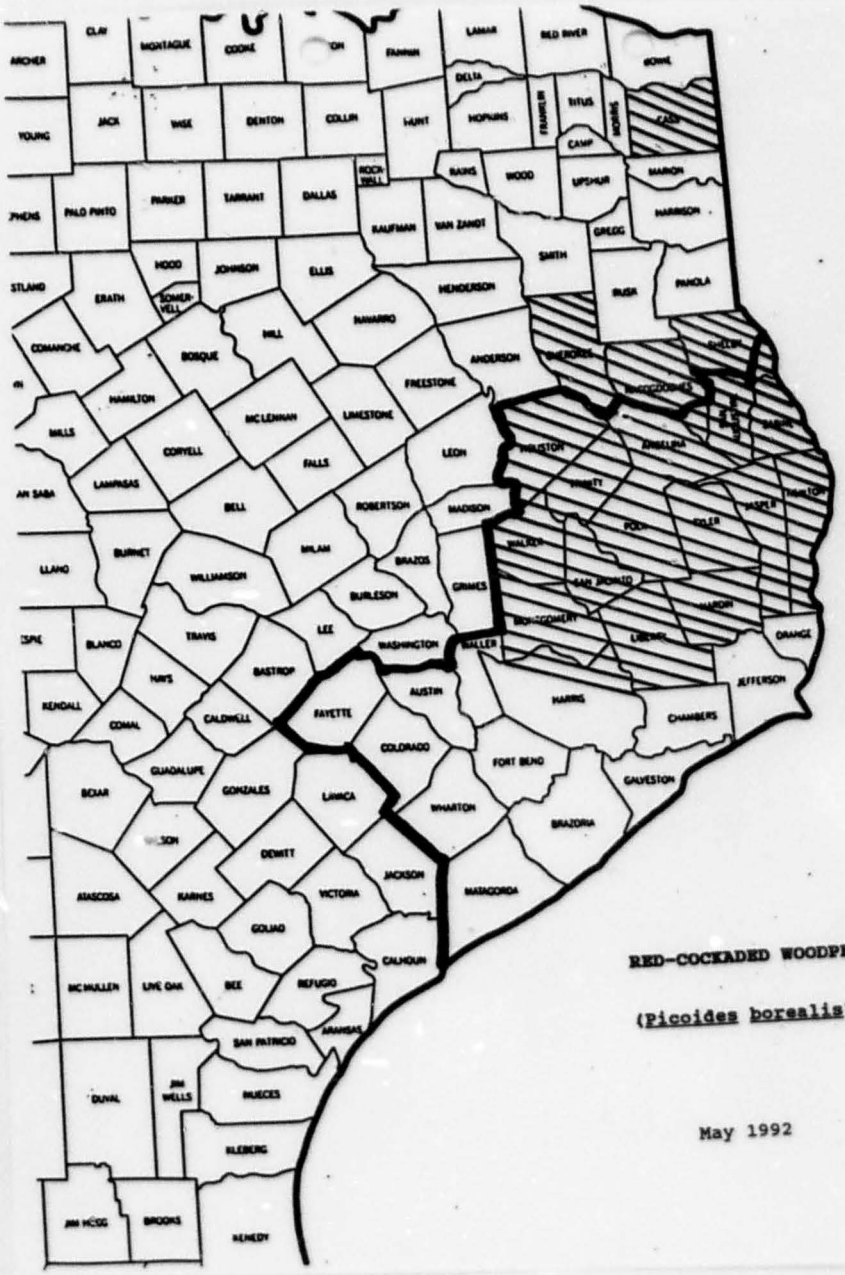

RED-COCKADED WOODPECKER

(Picoides borealis)

May 1992

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REFERENCE 22

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U.S. Department of Agriculture
Soil Conservation Service

05/30/89

SOIL DESCRIPTION REPORT

...EY AREA - LIBERTY COUNTY AREA, TEXAS

Map Unit Symbol	Description
BvB 113	BIENVILLE-KENEFICK COMPLEX, 1 TO 3 PERCENT SLOPES Bienville Part, Depth: >60 inches, Permeability: moderate rapid, Av. Water Capacity: low, Water Erosion: slight, Wind Erosion: -, Runoff: slow, Water Table: 4 ft.-6 ft., Drainage: somewhat excessively, Capability Unit: 3S dryland. Kenefick Part, Depth: >60 inches, Permeability: moderate, Av. Water Capacity: medium, Water Erosion: slight, Wind Erosion: -, Runoff: slow, Water Table: >6 ft., Drainage: well, Capability Unit: 2E dryland. 8C - LOAMY UPLAND - Deep uplands with loamy surfaces and friable loamy subsoils; slopes 0 to 5 percent; medium natural fertility; medium to high water holding capacity with good plant-soil-moisture relationship; medium to high production potential. 9A - SANDY UPLAND - Deep, sandy uplands with clayey or loamy subsoils within 40 inches; low natural fertility; low to medium water holding capacity with good plant-soil-moisture relationship; medium to high production potential. The Bienville series consists of deep, somewhat excessively drained, moderately rapidly permeable on stream terraces. The soil formed in sandy alluvium. In a representative profile, the soil is brownish loamy sand more than 70 inches thick. Slopes range from 0 to 5 percent. The Kenefick series consists of deep well drained, nearly level to gently sloping soils on terraces. The soils formed in loamy and sandy alluvium. In a representative profile, the surface layer is brown over yellowish brown and strong brown fine sandy loam about 18 inches thick. The next layer to 52 inches is red sandy clay loam, from 52 to 65 inches is red fine sandy loam. Below this is stratified layers of sand, loamy fine sand, and fine sandy loam in shades of red, brown, and yellow. Slopes range from 0 to 5 percent. 1o7 - These soils do not have significant management problems. Important commercial tree species include loblolly pine, sweetgum, red oak, and water oak. These soils are suited for pine or hardwoods, and the site index for loblolly pine is 100. The yield from an unmanaged stand of loblolly pine over a 50-year period is approximately 430 board feet (Doyle rule), or 310 for sweetgum per acre per year. Native species important to wildlife include red oak, water oak, ash, American beautyberry, yaupon, and white oak. High value grasses and forbs used by livestock include pinehill bluestem, longleaf uniola, beaked panicum, and virginia wildrye. Stocking rates depend on canopy density and range from 8-40 acres per animal unit.

continued

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U.S. Department of Agriculture
Soil Conservation Service

05/30/89

SOIL DESCRIPTION REPORT

SURVEY AREA - LIBERTY COUNTY AREA, TEXAS

Map Unit Symbol	Description
113	2s2 - Sandy texture may cause moderate equipment limitations and seedling mortality. Important commercial tree species include loblolly pine, shortleaf pine, and longleaf pine. These soils are suited for pines, and the site index for loblolly pine is 90. The yield from an unmanaged stand over a 50-year period is approximately 330 board feet (Doyle rule) for loblolly pine, per acre per year. Native species important to wildlife include red oak, American beautyberry, tickclover, flowering dogwood, yaupon, and sparkleberry. High value grasses and forbs used by livestock include pinehill bluestem, longleaf uniola, big bluestem, and little bluestem. Stocking rates depend on canopy density and range from 8-40 acres per animal unit.

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REFERENCE 23

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WARD McCARTY
GEMS DATA

COVERAGE

STATE	COUNTY	STATE NAME	COUNTY NAME
48	199	Texas	Hardin Co
48	291	Texas	Liberty Co

CENTER POINT AT STATE : 48 Texas
COUNTY : 291 Liberty Co

REGION OF THE COUNTRY

Zipcode found: 77575 at a distance of 5.2 Km

STATE	CITY NAME	FIPSCODE	LATITUDE	LONGITUDE
TX	LIBERTY	48291	30.0550	94.7950

CENSUS DATA

WARD McCARTY
LATITUDE 30: 5:16 LONGITUDE 94:45:22 1990 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	TOTALS
S 1	0	0	0	3785	2710	2204	8699

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STAR STATION

WBAN NO.	STATION NAME	LAT.	LONG.	PERIOD OF RECORD	DISTANCE (km)
12960	HOUSTON/INTCONT TX	29.9833	95.3667	1981-1985	59.9
12906	HOUSTON/ELLINGTON TX	29.6167	95.1667	1966-1970	65.6
12918	HOUSTON/HOBBY TX	29.6500	95.2833	1964-1968	70.3
12917	PRT ARTHUR/JEFFERSON CO TX	29.9500	94.0167	1981-1985	72.8
12923	GALVESTON/SCHOLES TX	29.2667	94.8667	1956-1960	91.8
93987	LUFKIN/ANGELINA CO TX	31.2333	94.7500	1967-1971	127.3
03937	LAKE CHARLES LA	30.1167	93.2167	1966-1970	148.0

U.S. SOIL DATA

STATE : TEXAS

LATITUDE : 30: 5:16 LONGITUDE : 94:45:22
THE STATION IS INSIDE H.U. 12030203

GROUND WATER ZONE: 10
RUNOFF SOIL TYPE: 1
EROSION: 1.1210E-03 CM/MONTH
DEPTH TO GROUND WATER BETWEEN: 3.0000E+02 AND 1.0000E+03
FIELD CAPACITY FOR TOP SOIL: 6.0000E-02
EFFECTIVE POROSITY BETWEEN: 2.0000E-02 AND 3.0000E-01
SEEPAGE TO GROUNDWATER BETWEEN: 4.6330E+03 AND 1.3900E+04 CM/MONTH
DISTANCE TO DRINKING WELL: 2.8000E+04 CM

U.S. CITY

STATE	PLACE NAME	FIPSCODE	LATITUDE	LONGITUDE
TX	LIBERTY	48291	30.0550	94.7950

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APPENDIX C

PREVENTION PLANS AND PERMITS

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(Prior to completing Part I, refer to regulations and instructions, 5.)

SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

PART I
GENERAL INFORMATION

1. Name of facility WARD MCCARTY, INC.
2. Type of facility ONSHORE FACILITY
3. Location of facility 3 MILES NORTH OF LIBERTY, LIBERTY COUNTY, TEXAS, ON HIGHWAY 146 (NORTH MAIN) 4408 NORTH MAIN.
4. Name and address of owner or operator:
   Name H.C. MCCARTY
   Address P.O. BOX 788
   LIBERTY, TEXAS 77575
5. Designated person accountable for oil spill prevention at facility:
   Name and title JUDY WALKER, VICE PRESIDENT
6. Facility experienced a reportable oil spill event during the twelve months prior to (effective date of 40 CFR, Part 112). (If YES, complete Attachment #1.)

MANAGEMENT APPROVAL

This SPCC Plan will be implemented as herein described.

Signature

Name JUDY WALKER

Title VICE PRESIDENT

CERTIFICATION

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

ROBERT A. TAYLOR
Printed Name of Registered Professional Engineer

Richard C. Taylor
Signature of Registered Professional Engineer

(Seal)

Date 3/3/93 Registration No. 24830 State TEXAS

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PART I
GENERAL INFORMATION

7. **Potential Spills — Prediction & Control:**

Source	Major Type of Failure	Total Quantity (bbls)	Rate (bbls/hr)	Direction of Flow*	Secondary Containment
OIL STORAGE TANKS (2) 400 BBL. WELDED TANKS	LEAK	800 BBLS.			FIREWALL
DIESEL TANKS (1) 400 BBL. WELDED TANK (1) 210 BBL. WELDED TANK		610 BBLS.			FIREWALL

Discussion:

OIL STORAGE TANK IS SOLD WHEN FULL. MAXIMUM AMOUNT IS 500 BBLS. IN STORAGE. 210 TANK NOT IN USE & CONTAINS 40 BBLS.

*Attach map if appropriate.

Name of facility OFFICE AND TRUCK TERMINAL

Operator WARD MCCARTY, INC.

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PART I
GENERAL INFORMATION

[Response to statements should be: YES, NO, or NA (Not Applicable).]

8. Containment or diversionary structures or equipment to prevent oil from reaching navigable waters are practicable. (If NO, complete Attachment #2.) YES

9. **Inspections and Records**
   A. The required inspections follow written procedures.
   B. The written procedures and a record of inspections, signed by the appropriate supervisor or inspector, are attached. YES
   Discussion: COMPANY PERSONNEL ARE FURNISHED COPY OF THIS PLAN. REQUIRE WEEKLY VISUAL AND GUAGE OF TANKS AND SECONDARY CONTAINMENT.

16. **Personnel Training and Spill Prevention Procedures**
   A. Personnel are properly instructed in the following:
   (1) operation and maintenance of equipment to prevent oil discharges; and
   (2) applicable pollution control laws, rules, and regulations.
   Describe procedures employed for instruction:
   SPILL PREVENTION AND APPLICABLE LAWS, RULES AND REGULATIONS ARE REVIEWED WITH MAINTENANCE PERSONNEL SEMI-MONTHLY.

   B. Scheduled prevention briefings for the operating personnel are conducted frequently enough to assure adequate understanding of the SPCC Plan. YES
   Describe briefing program:
   SAFETY MEETINGS EVERY 6-8 WEEKS. WEEKLY ON THE JOB TAILGATE SAFETY MEETINGS.

Name of facility OFFICE AND TRUCK TERMINAL

Operator WARD MCCARTY, INC.

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(Prior to completing . art II, ernate A, refer to regulations and ins.. ..ctions ;ee 6-7.)

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

A. Facility Drainage

1. **Drainage from diked storage areas is controlled as follows (include operating description of valves, pumps, ejectors, etc.** ***(Note: Flapper-type valves should not be used):***
THE LEVEL OF THE DIKE IS REDUCED BY FIREWALL DRAIN PIPE WITH VALVE. VALVE WILL BE OPENED TO DRAIN EXCESS WATER , AND VACUUM TRUCKS WILL BE USED TO PICK UP HYDROCARBONS.

2. **Drainage from undiked areas is controlled as follows (include description of ponds, lagoons, or catchment basins and methods of retaining and returning oil to facility):**
NORMAL DRAINAGE IS THROUGH DITCHES. OIL TRAPS IN DITCHES ARE INSPECTED WEEKLY. ANY HYDROCARBONS OBSERVED WILL BE PICKED UP WITH VACUUM TRUCKS.

3. **The procedure for supervising the drainage of rain water from secondary containment into a storm drain or an open watercourse is as follows (include description of (a) inspection for pollutants, and (b) method of valving security). (A record of inspection and drainage events is to be maintained on a form similar to Attachment #3):**
INSPECTED AT REGULAR DAILY VISUAL FOR LEAKS OR OIL ACCUMULATION. DRAINAGE IN THE AREA IS TOPOGRAPHICAL AND CUT BY MAN MADE DRAINAGE DITCHES. OIL OR CONTAMINATED WATER WILL BE REMOVED BY VACUUM TRUCKS OR ABSORBENTS AS REQUIRED.

INSPECTED WEEKLY NOTED ON ATTACHMENT #3.

Name of facility OFFICE AND TRUCK TERMINAL

Operator HARD MCCARTY, INC.

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PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

[Response to statements should be: YES, NO, or NA (Not Applicable).]

B. **Bulk Storage Tanks**

1. Describe tank design, materials of construction, fail-safe engineering features, and if needed, corrosion protection:
TANKS ARE WELDED AND BOLTED STEEL WITH PRESSURE VACUUM THIEF HATCHES.

2. Describe secondary containment design, construction materials, and volume:
SEE ATTACHED FIREWALL VOLUME.
OIL TRAPS AND DRAINAGE DITCHES AS MENTIONED PREVIOUSLY.

3. Describe tank inspection methods, procedures, and record keeping:
TANKS ARE OBSERVED DAILY BY SHOP PERSONNEL. EVIDENCE OF LEAKS ARE REPORTED TO OFFICE PERSONNEL. ANNUAL INSPECTION RECORD.

4. Internal heating coil leakage is controlled by one or more of the following control factors:
(a) Monitoring the steam return or exhaust lines for oil. N/A
Describe monitoring procedure:
(b) Passing the steam return or exhaust lines through a settling tank, skimmer, or other separation system. N/A
(c) Installing external heating systems. N/A

5. Disposal facilities for plant effluents discharged into navigable waters are observed frequently for indication of possible upsets which may cause an oil spill event. N/A
Describe method and frequency of observations:

Name of facility OFFICE AND TRUCK TERMINAL

Operator WARD MCCARTY, INC.

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PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

[Response to statements should be: YES, NO, or NA (Not Applicable).]

C. Facility Transfer Operations, Pumping, and In-plant Process

1. Corrosion protection for buried pipelines:
   (a) Pipelines are wrapped and coated to reduce corrosion.
   (b) Cathodic protection is provided for pipelines if determined necessary by electrolytic testing.
   (c) When a pipeline section is exposed, it is examined and corrective action taken as necessary.
2. Pipeline terminal connections are capped or blank-flanged and marked if the pipeline is not in service or on standby service for extended periods.
   Describe criteria for determining when to cap or blank-flange:
3. Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction.
   Describe pipe support design:
4. Describe procedures for regularly examining all above-ground valves and pipelines (including flange joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces):
5. Describe procedures for warning vehicles entering the facility to avoid damaging above-ground piping:

Name of facility OFFICE AND TRUCK TERMINAL

Operator HARD MCCARTY, INC.

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PART I.

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
(ONSHORE FACILITY (EXCLUDING PRODUCTION)

Facility D

[*Response to statements should be: YES, NO, or NA (Not Applicable).*]

1. Isolation

D. Facility Tank Car & Tank Truck Loading/Unloading Rack

Tank car and tank truck loading/unloading occurs at the facility. (If YES, complete 1 through 5 below.) N/A

1. Loading/unloading procedures meet the minimum requirements and regulations of the Department of Transportation (refer to *49 CFR Parts 171, 173, 174, 177, and 179*). _____

2. The unloading area has a quick drainage system. _____

3. The containment system will hold the maximum capacity of any single compartment of a tank truck loaded/unloaded in the plant. _____

Describe containment system design, construction materials, and volume: _____

2. Drainage from Unloading

4. An interlocked warning light, a physical barrier system, or warning signs are provided in loading/unloading areas to prevent vehicular departure before disconnect of transfer lines. _____

Describe methods, procedures, and/or equipment used to prevent premature vehicular departure:

5. Drains and outlets on tank trucks and tank cars are checked for leakage before loading/unloading or departure. _____

Name of facility OFFICE AND TRUCK TERMINAL

Operator WARD MCCARTY, INC.

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PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

[Response to statements should be: YES, NO, or NA (Not Applicable).]

E. Security

1. Plants handling, processing, or storing oil are fenced. YES

2. Entrance gates are locked and/or guarded when the plant is unattended or not in production. YES

3. Any valves which permit direct outward flow of a tank's contents are locked closed when in non-operating or standby status. NO

4. Starter controls on all oil pumps in non-operating or standby status are:
   (a) locked in the off position; NO
   (b) located at site accessible only to authorized personnel. NO

5. Discussion of items 1 through 4 as appropriate:
   #3-4-5 NO PAST HISTORY FOR 26 YEARS OF A LOSS, FENCING IS ADEQUATE.

6. Discussion of the lighting around the facility:
   10 SECURITY LIGHTS ARE ON DURING ALL NIGHT HOURS.

Name of facility OFFICE AND TRUCK TERMINAL

Operator WARD MCCARTY, INC.

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S. C PLAN, ATTACHMENT #1
SPILL HISTORY

(Complete this form for any reportable spill(s) which has (have) occurred from this facility during the twelve months prior to January 10, 1974 into _____ navigable water.)

NONE

1. Date _____ Volume _____ Cause: _____

Corrective action taken: _____

Plans for preventing recurrence: _____

2. Date _____ Volume _____ Cause: _____

Corrective action taken: _____

Plans for preventing recurrence: _____

3. Date _____ Volume _____ Cause: _____

Corrective action taken: _____

Plans for preventing recurrence: _____

Name of facility _____

Operator _____

(Attachment #1, SPCC Plan)

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SPCC PLAN, ATTACHMENT #2
OIL SPILL CONTINGENCY PLANS AND
WRITTEN COMMITMENT OF MANPOWER, EQUIPMENT, AND MATERIALS

Secondary containment or diversionary structures are impracticable for this facility for the following reasons (attach additional pages if necessary):

OIL STORAGE AND DIESEL TANKS ARE CONTAINED WITHIN A DIKED AREA WHICH WILL CONTAIN ANY PROBABLE LOSS OF FLUID PLUS RAINFALL.

	Yes
A strong oil spill contingency plan is attached.	YES
A written commitment of manpower, equipment, and materials is attached.	YES

Name of facility OFFICE AND TRUCK TERMINAL

Operator WARD MCCARTY, INC.

(Attachment #2, SPCC Plan)

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SI PLAN, ATTACHMENT #3
ONSHORE FACILITY BULK STORAGE TANKS
DRAINAGE SYSTEM

Inspection Procedure:

Record of drainage, bypassing, inspection, and oil removal from secondary containment:

Date of Drainage	Date of Bypassing Open	Date of Bypassing Closed	Date of Inspection	Oil Removal	Supervisor's or Inspector's Signature

Name of facility _____

Operator _____

(Attachment #3, SPCC Plan)

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OIL SPILL CONTINGENCY PLAN

WRITTEN COMMITMENT OF MANPOWER

A. Immediate response by facility personnel

1. Shut off the source of the spill. Take safety precautions.

2. Assess volume of spill and potential pollution possibilities taking into consideration the time required for equipment to arrive.

3. Call for manpower and equipment necessary to contain and remove the discharged oil or diesel. The primary manpower commitment should be made to contain and remove the discharge as soon as possible once the discharge has been stopped and all necessary precautions taken. Other work, such as repairs to equipment, should not take manpower from the containment and clean up phase unless specifically justified.

4. Notify the necessary government agencies.

B. Strategy for containment and cleanup:

1. Supervisor, will take charge of and direct containment and cleanup operations.

2. Keep the oil within the area already exposed by using: a. Floating booms, dams, dikes or other barriers
   b. oil absorbent material

3. If the oil movement cannot be stopped, an attempt should be made to direct the movement to areas least vulnerable to prolonged effects.

4. Normally, return all recovered product to separations facility. Product which is not suitable for processing should be disposed of in an approved manner.

Name of Facility: Office and Truck Terminal

Operator: Ward McCarty, Inc.

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C. Manpower and Equipment Available for a Response

Garner Environmental - Houston, Texas 713-920-1300

A.S.K. Environmental - Liberty, Texas 409-336-3738

We supply our own vacuum truck service.

Local Emergency Notification List

District #3 Railroad Commission of Texas		713-460-0631
Texas Water Commission		713-457-5191
Fire Dept.		911
Ambulance		911
Police		911
Sheriff Dept.		911
Baptist Hospital		409-336-7316
Ward McCarty, Inc. Personal		
Judy Walker	home	409-336-8621
	mobile	713-858-3595
Robert Davis	home	409-336-3341
	mobile	713-858-6426
David Miller	home	409-336-2837
	mobile	713-854-6400

Name of Facility: Office and Truck Terminal

Operator: Ward McCarty, Inc.

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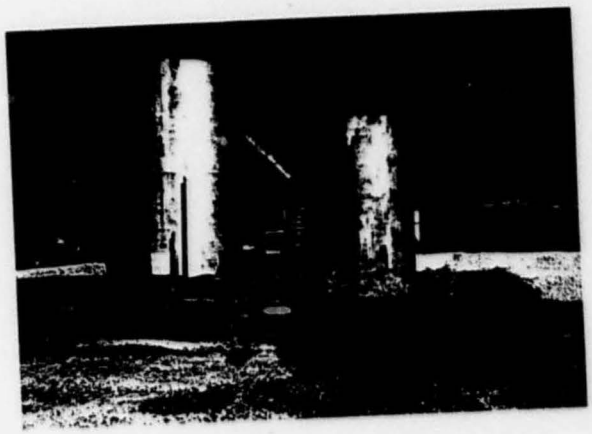
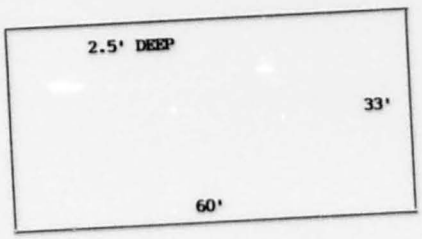
WARD McCARTY, INC.
OFFICE AND TRUCK TERMINAL
LIBERTY CO., TEXAS

DIESEL FUEL STORAGE





Total Firewall Capacity = 60'x33' x 2.5' = 4,950 ft.^{3}/5.61 ft.^{3}/ BBL.= 882 BBLS.
882 BBLS.- 85 BBLS. (Tank Space) = 797 BBLS. Capacity
797 BBLS. - 400 BBLS. (Largest Tank)=397 BBLS. Excess Capacity

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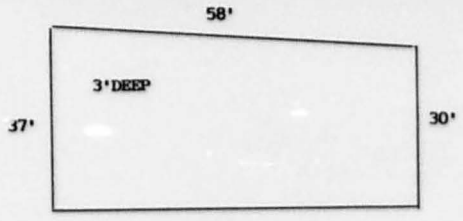
WARD-McCARTY, INC.

OFFICE AND TRUCK TERMINAL

LIBERTY CO., TEXAS

OIL STORAGE



Total Firewall Capacity = 57'x30'x3' + 1/2(7')x 57'x3' =
5130 ft.^{3} + 599 ft.^{3} = 5729 ft.^{3}/5.61 ft.^{3}/ BBL. = 1021 BBLS.
1021 BBLS. - 121BBLS. (Tank Space) =900BBLS. Capacity
900 BBLS. - 400 BBLS. (Largest Tank) = 500 BBLS. Excess Capacity

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RAILROAD COMMISSION OF TEXAS
Oil and Gas Division - UIC
P. O. Box 12967
Austin, Texas 78711-2967

APPLICATION FOR OIL AND GAS WASTE HAULER'S PERMIT

WH-1
Rev. 2/92

TYPE OR PRINT USING BLACK OR DARK BLUE INK — READ INSTRUCTIONS BELOW

1. Hauler name and address exactly as shown on P-5 organization report, including city, state, and zip code.

Ward McCarty, Inc.
P. O. Box 323
Liberty, Texas 77575

2. Hauler P-5 organization no.

896423

3. Purpose of filing ☐ Initial permit application
☐ Amendment of permit no. _____
☒ Annual renewal of permit no. 1138

4. Number designation of oil Railroad Commission districts where the hauler will pick up, transport or dispose of wastes.

3

5. Number designation of oil Railroad Commission districts with yards where hauler vehicles are housed.

3

CERTIFICATION. I certify that I am authorized to make this application, that this application was prepared by me or under my supervision and direction, and that the data and facts stated herein are true, correct, and complete to the best of my knowledge. If the above-named hauler is a corporation, I further certify that it is either subject to and not delinquent on the State of Texas Franchise Tax or exempt from or not subject to the tax.

Signature Jerry McCarty Name (type or print) Jerry McCarty

Title Treasurer Phone (409) 336-7313 Date 01-28-93

INSTRUCTIONS

Form WH-1: Application for Oil and Gas Waste Hauler's Permit
Reference: Statewide Rule 8(f)

WHO MUST FILE
A person who transports oil and gas waste for hire by any method other than by pipeline off a lease, unit, or other oil and gas property for disposal as required by Statewide Rule 8(f).
NOTE: A person may haul oil and gas waste for use in connection with drilling or servicing an oil or gas well without obtaining an oil and gas waste hauler permit.

PERMIT APPLICATION FEE
A non-refundable fee of $100 must be filed with each application for issuance, renewal, or material amendment of an oil and gas waste hauler permit. The check or money order should be made payable to "Treasurer, State of Texas." The following are not considered to be material amendments of an existing permit: addition or deletion of vehicles on the WH-2 and addition or deletion of an approved disposal/injection system on a WH-3.

INITIAL PERMIT APPLICATION
1. File a Form P-5, Organization Report, along with appropriate financial security with the Commission in Austin.
2. File an original of each of the following forms with the Commission's Director of Underground Injection Control in Austin as soon as you have received your P-5 organization number.
   - Form WH-1: Application for Oil and Gas Waste Hauler's Permit.
   - Form WH-2: Oil and Gas Waste Hauler's List of Vehicles.
   - Form WH-3: Oil and Gas Waste Hauler's Authority to Use an Approved Disposal/Injection System.

See General Instructions below.

RENEWAL PROCEDURES
The Commission's Austin office will mail a renewal notice to you approximately 60 days before your permit expires. The notice will include a pre-printed Form WH-1, preliminary lists of approved vehicles and approved disposal/injection systems, and instructions on the renewal process. See General Instructions below.

GENERAL INSTRUCTIONS
1. When the completed application is approved, the original Form WH-1 will be returned to you and will serve as your permit. At the same time, you will receive Permit Attachment A (Waste Hauler Vehicle Identification) and Permit Attachment B (Approved Disposal/Injection Systems). Each vehicle must carry a copy of the permit including those parts of the Commission-issued attachments listing approved vehicles and Commission-permitted disposal systems that are relevant to that vehicle's activities.
2. You must file a Form WH-3 with the Commission in Austin before using any system that is not shown on your current Permit Attachment B (Approved Disposal/Injection Systems). After the Form WH-3 is approved, you will be sent a revised Permit Attachment B with that system included.

FRANCHISE TAX CERTIFICATION: House Bill 175 (70th Legislature) states that a corporation may not be granted a permit unless it is current on Franchise Tax payment or is exempt from or not subject to the tax. A false certification will result in permit revocation.

209181 FEB 1993

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OIL AND GAS WASTE HAULER'S PERMIT

(To be completed by the Commission)

Permit No. 1138 is hereby issued to WARD MCCARTY, INC. subject to the conditions below.

PERMIT CONDITIONS

A. This permit authority is limited to the hauling, handling, and disposal of oil and gas waste off a lease, unit, or other oil and gas property.

B. This permit authorizes the permitted hauler to dispose of oil and gas waste only at the following disposal/injection systems:

- Commission-permitted disposal/injection systems for which a Form WH-3 has been submitted and which are listed on Permit Attachment B, Approved Disposal/Injection Systems;
- disposal systems operated under authority of a minor permit issued by the Commission; and
- disposal systems permitted by another state agency or another state provided the Commission has granted separate authorization for the disposal.

C. Each vehicle must be marked on both sides and in the rear with the permitted hauler's name (exactly as shown on the P-5 organization report) and permit number in characters not less than three inches high.

D. This permit authorizes the permitted hauler to use only those vehicles shown on the Commission-issued listing of approved vehicles (Permit Attachment A, Waste Hauler Vehicle Identification).

E. Each vehicle must carry a copy of this permit along with a copy of those parts of Permit Attachment A (Waste Hauler Vehicle Identification) and Permit Attachment B (Approved Disposal/Injection Systems) that are relevant to that vehicle's activities.

F. Each vehicle must be operated and maintained in such a manner as to prevent spillage, leakage, or other escape of oil and gas waste during transportation.

G. The permitted hauler must make each vehicle available for inspection upon request by Commission personnel.

H. The permitted hauler must compile and keep current a list of all persons by whom the permitted hauler is hired to haul and dispose of oil and gas waste and furnish such list to the Commission upon request.

I. The permitted hauler must adequately train all drivers to ensure compliance with Commission rules, including recordkeeping requirements, and adherence to proper emergency response and notification procedures.

J. The permitted hauler must keep a DAILY record of the oil and gas waste hauling operations of each approved vehicle. The daily record, signed and dated by the vehicle driver, must be kept open for Commission inspection and must contain the following information:

1. Identity of the property from which the oil and gas waste is hauled (operator name, lease name and number or other facility name or number, and county);
2. Type and volume of oil and gas waste received by the hauler at the property where it was generated;
3. Identity of the disposal system to which the oil and gas waste is delivered (operator name, lease name and number or system name, well number or system permit number, and county); and
4. Type and volume of oil and gas waste transported and delivered to the disposal system.

K. This permit is not transferable without the consent of the Commission.

L. This permit expires on 02/28/94. This permit, unless suspended or revoked for cause shown, will remain valid until the expiration date.

for Jerry Hodnett, Director of Underground Injection Control

02/05/93
Date of Permit Issuance

Dorothy Osborne
RRC Contact

(512) 483- 6818

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RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION - UIC
P.O. BOX 12967
AUSTIN, TX 78711-2967

OIL AND GAS WASTE HAULER
VEHICLE IDENTIFICATION

PERMIT ATTACHMENT A

Hauler Name	Permit Number	Expiration Date	Number of Vehicles
WARD MCCARTY, INC.	1138	02/28/94	14

Make	/ Model	/Yr	Serial No.	Cap.	/ Unit	License	Inspected
KW	/172	/81	188883	50	/ BBLS	3775DL	04/06/02
KW	/174	/81	188884	50	/ BBLS	3777DL	04/06/92
KW	/178	/81	191960	50	/ BBLS	3774DL	04/06/92
KW	/180	/81	193866	50	/ BBLS	3776DL	04/06/92
GMC	/190	/81	579216	50	/ BBLS	1445CW	04/06/92
MACK	/192	/85	012671	50	/ BBLS	4721DX	04/06/92
MACK	/194	/85	012672	50	/ BBLS	3553EJ	04/06/92
MACK	/196	/85	012673	50	/ BBLS	4849VV	04/06/92
INTL	/198	/81	B14910	50	/ BBLS	1766NR	04/06/92
KK	/KK6	/81	K849V	130	/ BBLS	419983	04/06/92
EAGLE	/1	/91	010828	130	/ BBLS	38876Z	04/06/92
EAGLE	/2	/91	020828	130	/ BBLS	38875Z	04/06/92
EAGLE	/3	/91	010856	130	/ BBLS	38883Z	04/06/92
EAGLE	/4	/91	020856	130	/ BBLS	38884Z	04/06/92

A COPY OF THE PART OF THIS LISTING RELEVANT TO THAT VEHICLES ACTIVITIES MUST BE CARRIED IN EACH VEHICLE SUBJECT TO THIS PERMIT

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RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION - UIC
P.O. BOX 12967
AUSTIN, TX 78711-2967

OIL AND GAS WASTE HAULER
APPROVED DISPOSAL/INJECTION SYSTEMS

PERMIT ATTACHMENT B

Hauler Name	Permit Number	Permit Date	Expiration Date	District Number
WARD MCCARTY, INC.	1138	03/01/93	02/28/94	03

System Operator Name / Lease Name	RRC ID	Well	County	Disposal	Project
AMOCO PRODUCTION COMPANY					
MCFADDIN, W.P.H.	03960	208	JEFFERSON		
MCFADDIN, W.P.H.	03960	187	JEFFERSON	W14-814	
MCFADDIN, W.P.H.	03960	182	JEFFERSON	W14-813	
ARCO OIL & GAS CO.-SILSBEE					
HUGHES-CASTILLO UNIT II	005463	2	JASPER	W14-6961	
HARDIN COUNTY SCHOOL LAND	04402	3D	HARDIN		
HAMPTON, A. FEE	01862	3	HARDIN	W14-5725	
CHENANGO ENTERPRISES, INC.					
CLUBB, A.J. #1	11899	1	LIBERTY	W14-833	
CHEVRON PIPE LINE COMPANY					
BORDAGES, I. R. ETAL -A-	01500	15	JEFFERSON	W14-7541	
CHEVRON U. S. A. INC.					
BORDAGES, I. R. ETAL -A-	01500	3D	JEFFERSON	W14-1628	
WHITE, MATTIE, ETAL	01884	3D	CHAMBERS	W14-114	
DAVIS, ROLAND C.					
WOODWORTH-MCMURTRY	01913	3D	LIBERTY	W14-8245	
DELOACH VACUUM SERVICE					
TAYLOR, ELSIE -A-	10741	1D	LIBERTY	W14-7707	
HOUSTON EXPL. & PROD. CO., INC.					
RICE, WM. INSTITUTE	02148	D 1	TYLER	W14-4565	
HOUSTON OIL & MINERALS CORP.					
BALDWIN, J. C. FEE A/C 1	05261	6	LIBERTY	W14-411	
LEE ENERGY CORPORATION					
KIRBY LUMBER CORP.	09041	4	HARDIN	W14-470	
LOBO RESOURCES, LTD.					
WING, SARAH F.	008241	57	POLK	W14-7956	
WING, SARAH F.	03758	48	POLK	W14-9166	
WING, SARAH F.	03758	41	POLK	W14-7270	
WING, SARAH F	03758	5	POLK	W14-8014	

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Hauler Name	Permit Number	Permit Date	Expiration Date	District Number
WARD MCCARTY, INC.	1138	03/01/93	02/28/94	03

System Operator Name / Lease Name	RRC ID	Well	County	Disposal	Project
MCGOWAN WORKING PARTNERS					
KNOWLES, W. T.	00062	4	CHAMBERS	W14-7560	
KNOWLES, W. T.	00062	3	CHAMBERS	W14-517	
MITCHELL ENERGY CORPORATION					
GILLESPIE, R. M.	05378	2	HARRIS		
GILLESPIE, R. M.	05378	5D	HARRIS	W14-1048	
MURPHY OIL USA, INC.					
ELLIOTT, F. P., FEE	03806	1E	HARDIN	W14-1060	
POYNOR CORPORATION					
ELLIS, MARY RANDALL	077878	1	CHAMBERS	W14-913	
FINLEY, W. T.	06111	5	LIBERTY	W14-17	
BARRETT, W. J., ESTATE	10419	1D	LIBERTY	W14-9396	
RIVES, G. S.	01892	1	LIBERTY	W14-7898	
QUAIL CREEK OIL CORPORATION					
SMITH, WM. FEE	02324	1	LIBERTY	W14-1005	
ARC FEE	09926	1D	JASPER	W14-9491	
RADLEY ELECTRIC, INC.					
BEST, JIM	04881	1A	LIBERTY	W14-2386	
TAYLOR SWD OPERATING, INC.					
KEY, DAVID R.	100193	1	MARION	W14-2533	
TEXACO INC.					
HUBBELL, WM. FEE	01294	1D	HARRIS		
TEXACO E & P INC.					
MINOR, D. C., FEE	02723	2D	LIBERTY	W14-6951	
TORTUGA OPERATING COMPANY					
LEWIS, SAM	008574	2	HARRIS	W14-2540	
DOUGHTIE, S. T.	04345	3D	HARRIS	W14-7943	
TRINITY PRODUCTS CO.					
TEXAS EXPLORATION CO	11306	14	JEFFERSON	W14-7488	
UNION SEABOARD CORPORATION					
CHAMBERS COUNTY	00173	12	CHAMBERS	W14-1180	

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Application No. ..... Certificate No. 5961

Docket No. S-6396

SALE & TRANSFER

Authorizing the Operation of a Specialized Motor Carrier Company Under the Laws of Texas, including the Provisions of Chapter 314, Acts, Regular Session of the Forty-second Legislature, 1931, as amended Regular Session, Forty-seventh Legislature 1941, and as otherwise amended.

RAILROAD COMMISSION OF TEXAS
MOTOR TRANSPORTATION DIVISION

INTRASTATE
Specialized Motor Carrier's Permanent Certificate of Convenience and Necessity

OCT 5 1962

Austin, Texas, ...

In accordance with the decision and order of the Railroad Commission of Texas, in its Specialized Motor Carrier Certificate of Convenience and Necessity, Docket No. 5961, and in accordance with the Laws of Texas, including the provisions of Chapter 314, Acts, Regular Session of the Forty-First Legislature, 1929, as amended at the Regular Session of the Forty-Second Legislature, 1931, as amended at the Regular Session of the Forty-Seventh Legislature, 1941, and as otherwise amended.

THIS CERTIFIES that the public convenience and necessity require such operation and permission is hereby granted to: WARD-MCCARTY HOT OIL PARAFFIN SERVICE
(Names or name of carrier)
whose principal address is P.O. Box 323, Liberty, Texas, to operate a specialized motor carrier service, as follows, within the State of Texas:

TO TRANSPORT:

OILFIELD EQUIPMENT to and from all Texas points located within a two hundred (200) mile radius of Rosebud, Texas.

THE TRANSPORTATION OF OILFIELD EQUIPMENT is prohibited from any dealer, warehouse, or refinery to another dealer, warehouse, or refinery.

(Purchased from Windham & Sons, Inc.)

The transportation of HOUSEHOLD GOODS, USED OFFICE FURNITURE & EQUIPMENT, LIVESTOCK FEEDSTUFF, FARM MACHINERY & GRAIN is prohibited from dealer to dealer.

ALL EQUIPMENT to be operated under this authority is restricted exclusively to that owned by the holder of such authority and shall not exceed the number as shown by the last equipment record on file with the Commission.

This certificate and authority to remain in effect from and after the date hereof, subject to the provisions, limitations and restrictions of Chapter 314, Acts, Regular Session of the Forty-first Legislature, 1929, as amended at the Regular Session of the Forty-second Legislature, 1931, as amended Regular Session of the Forty-seventh Legislature, 1941, and as otherwise amended, and the rules and regulations of the Railroad Commission of Texas heretofore prescribed or which may be hereafter prescribed under and pursuant to the authority conferred upon it by law.

RAILROAD COMMISSION OF TEXAS

W. J. Murray Jr. Chairman

Ben Ramsey

Secretary

Commissioners

JMS:jd

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OFFICE OF

RAILROAD COMMISSION OF TEXAS

DAVID M. GARRICK
Director
JERRY W. MULLICAN
Director of Underground Injection Control
(512) 463-6790
FAX (512) 463-6780

LENA GUERRERO, Chairman
JAMES E. (JIM) NUGENT, Commissioner
ROBERT KRUEGER, Commissioner

OIL & GAS DIVISION

1701 N. CONGRESS — CAPITOL STATION — P. O. BOX 12967 — AUSTIN, TEXAS 78701-2967

PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION
INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS

PERMIT NO. 06727, AMENDED

Roland C. Davis
P. O. Box 174
Hardin, TX 77561

Based on information contained in your application (Form W-14) dated June 28, 1991, you are hereby authorized to dispose of oil and gas waste into your well designated as follows:

Chambers Estate Lease, (20345), Well No. 1,
Hardin Field, Liberty County, RRC District 03

APPROVED AND ISSUED ON September 20, 1991.

NOTE: Amends permit dated February 17, 1988.

Adds commercial surface facility requirements and weekly tubing-casing annulus pressure monitorings conditions.

Deletes cement block squeeze condition.

Jerry W. Mullican
Director of Underground Injection Control

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RAILROAD COMMISSION OF TEXAS
Oil and Gas Division

Form WH-5
Rev. 10/1/83
483-028

Statement of Hauler's Authority to Use an Approved Disposal or Injection System

▶ This is to certify that the salt water hauler named below is authorized to inject or dispose of salt water in the system described on this form.

PART I: To be completed by **salt water hauler** — Type or print only

1. Name and Address (Exactly as shown on Form WH-1, Application for Salt Water Hauler's Permit)

Ward-McCarty, Inc.
P. O. Box 788
Liberty, Texas 77575

2. RRC Operator Number _____ 3. Hauler's permit number (if assigned) _____

Read Instructions on Back

PART II: To be completed by **disposal or injection system operator**

4. Operator's Name and Address (Exactly as shown on Form P-5, Organization Report)

Trinity Products Company
P. O. Box 587
Liberty, Texas 77575

5. RRC Operator Number 870290

6. RRC District No. 3

7. County of Well Site Jefferson

8. API No. 42-

9. Oil Lease No. 84946

10. Gas Well ID No.

11. Well No. 14

12. Field Name (Exactly as shown on RRC records) Big Hill

13. Lease Name Texas Exploration Company

14. Location

● Section No. 61 Block No. _____ Survey T & NO No. _____ Abstract No. A-707

15. Authority to dispose or inject (mark as appropriate)

Type	RRC Number	Date
Disposal Well Permit	03-0896	/ / (mo. day year)
Project Number	F-	/ / (mo. day year)
Special Order		/ / (mo. day year)
Letter of Authorization		/ / (mo. day year)

16. Type of disposal or injection system (mark as appropriate)

☒ Disposal well into non-productive zone
☐ Injection well into productive zone
☐ Other (specify) _____

CERTIFICATE:
I declare that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that data and facts stated therein are true, correct, and complete, to the best of my knowledge.

Trinity Products Company — Typed or printed name of system operator
409/336-2278 — Telephone: Area Code Number
Asst. Secretary — Title of person
1 / 16 / 89 — Date: mo. day year
Signature: Sue Ann Parker

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RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

Form WH-5
7/8/69

STATEMENT OF HAULERS AUTHORITY TO USE AN APPROVED DISPOSAL SYSTEM

This is to certify that Ward McCarty, Inc.

of Liberty County, Texas is authorized to dispose of salt water in the disposal system described below:

SYSTEM OPERATOR John E. DeLoach

TYPE OF SYSTEM: ☒ Disposal Well ☐ Waterflood Injection Well ☐ Lined Pit
☐ Unlined Pit ☐ Other

LOCATION OF SYSTEM:

Section No. _____ Block No. _____

Survey Jesse Devore County Liberty

Lease Elsie Taylor "A" Well No. SWD #1

Field Name Hull

Authority for disposal system (RRC Order No.) 10741

Date of Commission approval for disposal system 5-10-76

– CERTIFICATE –

I declare under penalties prescribed in Article 6036c, R. C. S., that this report was prepared by me or under my supervision and direction, and that data and facts stated therein are true, correct, and complete, to the best of my knowledge.

Date 3-8-79 Signature John E DeLoach

Telephone 409 713 AREA CODE 536-6830 536-6211 Title Owner John E. DeLoach

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RAILROAD COMMISSION OF TEXAS
Oil and Gas Division

Form WH-5
Rev. 10/1/83
483-028

Statement of Hauler's Authority to Use an Approved Disposal or Injection System

▶ This is to certify that the salt water hauler named below is authorized to inject or dispose of salt water in the system described on this form.

PART I: To be completed by **salt water hauler** — Type or print only

1. Name and Address (Exactly as shown on Form WH-1, Application for Salt Water Hauler's Permit)

WARD MCCARTY
P.O. Drawer 788
Liberty, Texas 77575

2. RRC Operator Number _____ 3. Hauler's permit number (if assigned) _____

Read Instructions on Back

PART II: To be completed by **disposal or injection system operator**

4. Operator's Name and Address (Exactly as shown on Form P-5, Organization Report)

Chenango Enterprise Inc.
P.O. Box 287
Devers, Texas 77538

5. RRC Operator Number 11899

6. RRC District No. 3

7. County of Well Site Liberty

8. API No. 42-

9. Oil Lease No. -0-

10. Gas Well ID No. -0-

11. Well No. 1 & 1A

12. Field Name (Exactly as shown on RRC records) Hull

13. Lease Name A.J. Clubb

14. Location
Section No. _____ Block No. Lot 10 Survey Jessie Devore No. _____ Abstract No. A-23

15. Authority to dispose or inject (mark as appropriate)

Type	RRC Number	Date
Disposal Well Permit	06105	06 / 30 / 79 (mo. day year)
Project Number	F-	/ /
Special Order		/ /
Letter of Authorization		/ /

16. Type of disposal or injection system (mark as appropriate)

- [x] Disposal well into non-productive zone
- [ ] Injection well into productive zone
- [ ] Other (specify) _____

CERTIFICATE:
I declare that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that data and facts stated therein are true, correct, and complete, to the best of my knowledge.

Chenango Enterprises Inc. — Typed or printed name of system operator
Vice-President — Title of person
409-536-6850
409-549-7112 — Telephone: Area Code Number
November / 06 / 87 — Date: mo. day year
Mary Clayton — Signature

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HOUSTON EXPLORATION & PRODUCTION CO.
1114 Lost Creek Blvd., Suite G 20 Austin, Texas 78746
(512) 327-8774 Fax (512) 327-8773

0179C8

January 18, 1993

Mr. David Miller
Ward McCarty Inc.
P. O. Box 768
Liberty, Texas 77575

Re: Saltwater Disposal
Wm. Rice Inst. #1D
Tyler Co., Texas

Dear David:

Please find enclosed a copy of the Railroad Commission form WH-3 which has been filed by us to permit you to begin hauling produced saltater into this disposal facility. The pumper for this system is

Mr. Wesley Moore
P. O. Box 205
Evadale, Texas 77615
409-276-1932 or 409-429-3036

and he should be contacted when you begin deliveries. All deliveries should be made into tank #61600.

The charge for disposal is thirty cents per barrel (30¢/bbl). No vacuum truck work please, only clean produced field saltwater is permitted. Delivery tickets will be available in the mail box at the location. Payment is due within thirty (30) days and checks should be paid to Houston Exploration & Production Co. at the above address.

The available capacity of this system at this time is in excess of 1000 BPD. Please keep Mr. Moore advised of your anticipated volumes.

Thank you for your cooperation in this matter.

Yours very truly,

Harry T. Pringle, Jr.
Consultant

cc Mr. Wesley Moore

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RAILROAD COMMISSION OF TEXAS
Oil and Gas Division - UIC
P. O. Box 12967
Austin, Texas 78711-2967

OIL AND GAS WASTE HAULER'S AUTHORITY TO USE APPROVED DISPOSAL/ INJECTION SYSTEM

WH-3
Rev. 2/92

TYPE OR PRINT USING BLACK OR DARK BLUE INK

READ INSTRUCTIONS ON BACK

I. To be completed by the hauler (1-4)

1. Hauler name (as shown on WH-1 Application for Oil and Gas Waste Hauler's Permit)	2. Hauler P-5 organization no.	3. Hauler permit no., if assigned
Ward McCarty Inc.	896423	WHP-1138

4. Hauler address (including city, state, and zip code)
P. O. Box 788, Liberty, Texas 77575

II. To be completed by the system operator (5-10)

5. System operator name (exactly as shown on P-5 organization report)	6. System operator P-5 organization no.
Houston Expl. & Prod. Co., Inc.	402714

7. System operator address (including city, state, and zip code)
1114 Lost Creek Blvd., Suite G 20, Austin, Texas 78746

8. Disposal/Injection Wells. Identify exactly as shown on H-10 Annual Disposal/Injection Well Monitoring Report.

RRC Dist. No.	Field Name / Lease Name	Oil Lease or Gas ID No.	Well Number	UIC Control Number	Check One: non-commercial	Check One: commercial
03	Hillister, E. (Cockfield Fifth) Rice, Wm. Institute	02148	1	000052254		X

9. Other Disposal Systems. Identify exactly as shown on system's Commission-granted permit.

Dist.	Facility No. and County	RRC-Assigned Permit No.	Type of System
			☐ Land Farm ☐ Pit ☐ Landfill ☐ Other (Specify)
			☐ Land Farm ☐ Pit ☐ Landfill ☐ Other (Specify)
			☐ Land Farm ☐ Pit ☐ Landfill ☐ Other (Specify)

10. CERTIFICATION OF SYSTEM OPERATOR

H. T. Pringle, Jr.
Signature / Name (type or print)

Consultant / (512) 327-8774 / 1/18/93
Title / Phone No. / Date

I certify that the waste hauler named above is authorized to dispose of oil and gas waste at the systems identified on this form; that I am authorized to make this report; that this report was prepared by me or under my supervision and direction; and that the data and facts contained herein are true, correct and complete to the best of my knowledge.

RRC USE ONLY

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RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

MACK WALLACE, Chairman
JAMES E. (JIM) NUGENT, Commissioner
JOHN SHARP, Commissioner

JIM MORROW, P.E.
Director
JERRY W. MULLICAN
Director of Underground
Injection Control

1701 N. CONGRESS | CAPITOL STATION — P. O. DRAWER 12967 | AUSTIN, TEXAS 78711-2967

July 2, 1987

Gatlin Landfarm
Route 1, Box 313
Liberty, TX 77575

Re: Permit for Commercial Landfarming
R. C. Gatlin Property -
Hardin Disposal Site
Liberty County, Texas
(Permit No. LF-0036)

Gentlemen:

This permit is your authority to landfarm water base drilling fluid on the 20 acre site in the A. B. Hardin Survey, A-46 in Liberty County, Texas. The site is located 2¼ miles Northwest of Hardin, Texas. A plat of the permitted disposal site is attached and incorporated as a part of this permit. Landfarming authority is based upon information provided in your letters received March 13, 1987, March 26, 1987, April 3, 1987, and May 6, 1987.

This permit is granted in accordance with Statewide Rule 8 of the Railroad Commission and is subject to the following provisions:

1. No oil and gas waste other than drilling fluid may be landfarmed at the approved disposal site.

2. No drilling fluid with a chloride concentration in excess of 3,000 milligrams per liter may be landfarmed at the approved disposal site.

3. No oil base drilling fluid may be landfarmed at the approved disposal site.

4. The facility shall have a fence and a lockable gate to prevent unauthorized access. Fencing is required around the entire approved disposal site except to the extent that terrain or vegetation prevent truck access to the site.

5. Permittee shall construct dikes to completely surround the approved disposal site and thereafter maintain such dikes so that no storm water runoff may enter or exit the approved disposal site. After cessation of use of the approved site for landfarming, permittee must remove these dikes.

An Equal Opportunity Employer

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6. Drilling fluid must be landfarmed on the approved disposal site in such a manner that the fluid will not migrate off the approved disposal site or enter any watercourse or drainageway, including any drainage ditch, dry creek, flowing creek, river, or any other body of surface water.

7. Permittee shall insure that the fluids are dispersed in an even manner, and at a rate such that an accumulation of no more than 3-inches may occur over any one portion of the approved landfarming site.

8. The permit does not authorize the use of maintenance of any pit in connection with the approved disposal site. Form H-11, application to Maintain and Use a Pit, must be submitted before any authorization to use a pit will be granted.

9. This permit is not transferable without the consent of the Commission. Any request for permit transfer should be filed with the Director of Underground Injection Control.

10. This authority to landfarm drilling fluids upon the approved site expires on July [illegible], 1988.

This authorization is granted subject to review and revocation should investigation show noncompliance with the stipulations stated herein.

Sincerely yours,

Jerry W. Mullican
Director of Underground
Injection Control

JWM/JMH/js

Attachment (Plat)

cc: RRC - Houston (w/attachment)

Mr. Dennis Palafox (w/attachment)
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

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RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

JAMES E. (JIM) NUGENT, Chairman
MACK WALLACE, Commissioner
CLARK JOBE, Commissioner

JIM MORROW, P.E.
Director
JERRY W. MULLICAN
Director of Underground
Injection Control

1701 N. CONGRESS | CAPITOL STATION — P. O. DRAWER 12967 | AUSTIN, TEXAS 78711-2967

PERMIT TO MAINTAIN AND USE A PIT

Pit Permit No. P001216, Transferred

Carlton W. Trant Disposal
Star Rt. 2, Box 134A
Liberty, Texas 77575

Based on information contained in your application (Form H-11) dated March 3, 1986, and information received April 4, 1986, you are hereby authorized to maintain and use the pit designated herein:

Type of Pit: Drilling Fluid Disposal Pit
C.W. Trant Property
50 feet FSL and 1630 feet FEL of the Moses A. Carroll Survey, A-8
Chambers County, RRC District 03

Authority is granted to maintain and use the pit in accordance with Statewide Rule 8 and subject to the following conditions:

1. Use of the pit is limited to disposal of water base drilling fluid with a chloride concentration of 3000 mg/l or less. No other oil field fluids or oil and gas wastes may be stored or disposed of in the pit.

2. The capacity of the pit may not exceed 1,000,000 barrels.

3. At least 5 feet of freeboard must be maintained between the fluid level in the pit and the top of the pit dikes.

4. The pit may only be used for the disposal of drilling fluid when landfarming, authorized by Commercial Landfarming Permit LF-0005, proves difficult or the landfarming site is inaccessible.

5. The pit must be equipped with a level alarm or visual devise to alert waste haulers using the pit that the fluid level in the pit has reached the maximum level allowed by this permit.

6. The facility shall have a fence and lockable gate to prevent unauthorized access. Fencing is required around the entire approved disposal site except to the extent that terrain or vegetation prevent truck access to the site.

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7. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the pit shall be in accordance with the information represented on the application (Form H-11) and attachments thereto.

8. A sign shall be posted at the pit which shall show the pit permit number in numerals at least one inch in height.

9. Upon final cessation of use of the pit, the pit must be closed in accordance with the Commission approved closure plan which is on file with the Commission at the time of the pit closure. The closure plan submitted with the application is hereby approved. Any request to modify the closure plan should be filed with the Director of Underground Injection Control. Upon final closure, the District Office shall be notified in writing.

10. This permit is nontransferable without the consent of the Commission. Any request for permit transfer should be filed with the Director of Underground Injection Control.

11. This permit does not authorize the discharge of any oil and gas wastes from the pit.

12. Authority to use the pit expires November 30, 1989.

This authorization is granted subject to review and cancellation should investigation show that such authorization is being abused.

APPROVED AND ISSUED ON April 29,1986.

Jerry W. Mullican, Director
Underground Injection Control

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RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

JAMES E. (JIM) NUGENT, Chairman
KENT HANCE, Commissioner
JOHN SHARP, Commissioner

JIM MORROW, P.E.
Director
JERRY W. MULLICAN
Director of Underground
Injection Control

1701 N. CONGRESS | CAPITOL STATION — P. O. DRAWER 12967 | AUSTIN, TEXAS 78711-2967

PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION
INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS

PERMIT NO. 07488

Trinity Products Company
1125 Commerce
P. O. Box 587
Liberty, TX 77575

Based on information contained in your application (Form W-14) dated September 20, 1988, you are hereby authorized to dispose of oil and gas waste into your well designated as follows:

Texas Exploration Co. Lease, Well No. 14,
Big Hill Field, Jefferson County, RRC District 03

Authority is granted to inject in accordance with Statewide Rule 9 of the Railroad Commission of Texas and subject to the following special and standard conditions:

SPECIAL CONDITIONS:

1. Oil and gas waste shall only be injected into strata in the subsurface depth interval from 1305 feet to 1621 feet.

2. The injection volume shall not exceed 2000 barrels per day.

3. The maximum operating surface injection pressure shall not exceed 0 psig.

4. An annual annulus pressure test must be performed and the results submitted in accordance with the instructions of Form H-5.

5. The tubing-casing annulus pressure must be monitored at least weekly and reported annually on Form H-10 to the Commission's Austin Office.

STANDARD CONDITIONS:

1. Injection must be through tubing set on a packer. The packer must be set no higher than 100 feet above the top of the permitted interval.

2. The District Office must be notified 48 hours prior to:
   a. running tubing and setting packer;
   b. beginning any workover or remedial operation;
   c. conducting any required pressure tests or surveys.

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3. The wellhead must be equipped with a pressure observation valve on the tubing and for each annulus.

4. Prior to beginning injection, and subsequently after any workover, an annulus pressure test must be performed. The test pressure must equal the maximum authorized injection pressure or 500 psig, whichever is less, but must be at least 200 psig. The test must be performed and the results submitted in accordance with the instructions of Form H-5.

5. The injection pressure and injection volume must be monitored at least monthly and reported annually on Form H-10 to the Commission's Austin Office.

6. Within 30 days after completion, conversion to disposal, or any workover which results in a change in well completion, a new Form W-2 or G-1 must be filed in duplicate with the District Office to show the current completion status of the well. The date of the disposal well permit and the permit number must be included on the new Form W-2 or G-1.

7. Written notice of intent to transfer the permit must be submitted to the Commission at least 15 days prior to the date the transfer will occur by filing Form P-4.

8. Unless otherwise required by conditions of this permit, completion and operation of the well shall be in accordance with the information represented on the application (Form W-14).

9. The operator shall be responsible for complying with the following requirements so as to assure that discharges of oil and gas waste will not occur:

   a. Prior to beginning operation, all collecting pits, skimming pits, or washout pits must be permitted under the requirements of Statewide Rule 8.

   b. Prior to beginning operation, a catch basin constructed of concrete, steel, or fiberglass must be installed to catch oil and gas waste which may spill as a result of connecting and disconnecting hoses or other apparatus while transferring oil and gas waste from tank trucks to the disposal facility.

   c. Prior to beginning operation, all fabricated waste storage and pretreatment facilities (tanks, separators, or flow lines) shall be constructed of steel, concrete, fiberglass, or other materials approved by the Director of Underground Injection Control. These facilities must be maintained so as to prevent discharges of oil and gas waste.

   d. Prior to beginning operation, dikes shall be placed around all waste storage, pretreatment, or disposal facilities. The dikes shall be designed so as to be able to contain a volume equal to the maximum holding capacity of all such facilities. Any liquids or wastes which do accumulate in the containment area shall be dewatered within 24 hours by being disposed of in an authorized disposal facility.

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e. Prior to beginning operation, the facility shall have security to prevent unauthorized access. Access shall be secured by a 24-hour attendant, a fence and locked gate when unattended, or a key-controlled access system. For a facility without a 24-hour attendant, fencing shall be required unless terrain or vegetation prevents truck access except through entrances with lockable gates.

f. Prior to beginning operation, each storage tank shall be equipped with a device (visual gauge or alarm) to alert drivers when each tank is within 130 barrels from being full.

10. Form P-18, Skim Oil Report, must be filed in duplicate with the District Office by the 15th day of the month following the month covered by the report.

Provided further that, should it be determined that such injection fluid is not confined to the approved strata, then the permission given herein is suspended and the disposal operation must be stopped until the fluid migration from such strata is eliminated.

APPROVED AND ISSUED ON November 29, 1988.

Jerry W. Mullican
Director of Underground Injection Control

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R.. .ROAD COMMISSION OF T..AS
OIL AND GAS DIVISION

KENT HANCE, Chairman
JOHN SHARP, Commissioner
JAMES E. (JIM) NUGENT, Commissioner

JIM MORROW, P.E.
Director
JAMES W. WALKER, JR.
Director,
Production Allocation
(512) 463-6838

1701 N. CONGRESS | CAPITOL STATION — P. O. DRAWER 12967 | AUSTIN, TEXAS 78711-2967

April 25, 1989

Trinity Products Company
P.O. Box 587
Liberty, TX 77575

RE: Serial number assigned to Trinity Products Company for Form P-18 for the Texas Exploration Co. #14 facility.

Gentlemen:

This is to inform you that Operator's Serial Number 03-0969 is hereby assigned to your company for the filing of Railroad Commission Form P-18 on the referenced. It is requested that you place this number 03-0969 in the blank space provided on the form when you file the next month's report.

If there is any question concerning the filing of this form, please call Elizabeth Mungia at (512) 463-6865.

Yours truly,

Sarah Gavin

Sarah Gavin

/sg

cc: RRC: District Office - 03 - Houston, Texas

An Equal Opportunity Employer

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1. Purpose of Filing: [ ] New Filing [ ] Address Correction [ ] Change of Officers or Resident Agent [ ] Annual Refiling

2. RRC Operator No. (if assigned) 005832

3. ORGANIZATION Name and Mailing Address — To change organization name, submit new P-6

WARD MCCARTY, INC.
P. O. BOX 323
LIBERTY, TEXAS 77575

Street Address

4408 North Main St.
Liberty, Texas 77575

4. Current Plan of Organization (if application is new or organization has changed, select one)

[#] A. Corporation [ ] B. Limited Partnership [ ] C. Sole Proprietorship [ ] D. Partnership [ ] E. Trust [ ] F. Joint Venture [ ] G. Other

5. RESIDENT AGENT

Name
Street Address
and, if different
Mailing Address

6. THREE PRIMARY OFFICERS (Read instructions on back carefully)

(1) Name (Full Legal) MCCARTY, H. C. JR.
Title PRES.
Street Address SAME AS ORGANIZATION ADDRESS.
Mailing Address
[#] Driver's Lic. [ ] State ID State: TEX No.: 00537742 State: No.:

(2) Name (Full Legal) MILLER, JUDY
Title VICE-PRES.
Street Address SAME AS ORGANIZATION ADDRESS
Mailing Address
[#] Driver's Lic. [ ] State ID State: TEX. No.: 005673875 State: No.:

(3) Name (Full Legal) MANN, LINDA
Title SECY
Street Address P. O. BOX 1286 LIBERTY, TEXAS
Mailing Address
[#] Driver's Lic. [ ] State ID State: TEX. No.: 05175540 State: No.:

7. If a reorganization, give name and address of previous organization and previously assigned operator number.

N/A
Previously assigned operator number

8. If the organization listed in No. 3 is a subsidiary or an assumed name (dba), give name and address of associated company and its operator number, if assigned.

9-1988

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RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

MACK WALLACE, Chairman
JAMES E. (JIM) NUGENT, Commissioner
JOHN SHARP, Commissioner

JIM MORROW, P.E.
Director
JERRY W. MULLICAN
Director of Underground
Injection Control

1701 N. CONGRESS | CAPITOL STATION — P. O. DRAWER 12967 | AUSTIN, TEXAS 78711-2967

PERMIT TO MAINTAIN AND USE A PIT

Pit Permit No. P005832

Ward McCarty, Inc.
P. O. Box 323
Liberty, TX 77575

Based on information contained in your application (Form H-11) dated October 12, 1984 and information submitted July 30, 1986, you are hereby authorized to maintain and use the pit designated herein:

Type of Pit: Washout Pit
Ward McCarty Yard - Liberty Facility, Pit No. 1
1500 feet FNL and 6750 feet FEL of the Geo. Orr League, A-91
Liberty County, RRC District 03

Authority is granted to maintain and use the pit in accordance with Statewide Rule 8 and subject to the following conditions:

1. Use of the pit is limited to collection of waste water from washout of tanks and trucks hauling water base drilling fluid only. No other oil field fluids or oil and gas wastes may be stored or disposed of in the pit.

2. The capacity of the pit may not exceed 5,000 barrels.

3. At least 2 feet of freeboard must be maintained between the fluid level in the pit and the top of the pit dikes.

4. The chloride concentration of the waste fluid shall not exceed 1,000 mg/l.

5. An analysis of the chloride content of the produced water disposed of in the pit must be performed annually and a copy of the results filed with the Director of Underground Injection Control.

6. No oil may be allowed to accumulate on top of the water stored in the pit. Any oil on top of the water must be skimmed off.

An Equal Opportunity Employer

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7. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the pit shall be in accordance with the information represented on the application (Form H-11) and attachments thereto.

8. A sign shall be posted at the pit which shall show the pit permit number in numerals at least one inch in height.

9. The pit must be dewatered, backfilled, and compacted within 120 days of final cessation of use of the pit. Final closure of the pit must be accomplished in such a manner that rainfall will not collect at the pit location after pit closure. Upon final closure, the District Office shall be notified in writing.

10. This permit is nontransferable without the consent of the Commission. Any request for permit transfer should be filed with the Director of Underground Injection Control.

11. This permit does not authorize the discharge of any oil and gas wastes from the pit.

This authorization is granted subject to review and cancellation should investigation show that such authorization is being abused.

APPROVED AND ISSUED ON: May 14, 1987

Jerry H. Mullican, Director
Underground Injection Control

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OF THE ORIGINAL.

VACUUM & PUMP TRUCKS
& 100 BARREL TRANSPORTS
DRILLING MUDS & STORAGE
WINCH & FLOAT TRUCKS

WARD McCARTY, INC.
P. O. Box 323
LIBERTY, TEXAS 77575

TELEPHONE
LIBERTY, TEXAS 336-7318
DIRECT LINE
HOUSTON 713/228-3041

July 28, 1986

Railroad Commission of Texas
Attn: Ms. Leslie Savage
Underground Injection Control
Capitol Station
P.O. Drawer 12967
Austin, Texas 78711-2967

Re: Form H-11 Ward McCarty
Facility - Liberty County
Control # 005832

Dear Ms. Savage:

As per your telephone instruction of July 22, 1986, I am enclosing the result of a recent chloride count on the pit in question.

Please advise if further information is required.

Best Regards,

H. C. McCarty

H.C. McCarty
President

HCM/ld

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OF THE ORIGINAL.

Champion Chemicals, Inc.
P.O. BOX 1088
DAYTON, TEXAS 77535
(409) 258-7610

Report for WARD McCARTY
cc
Company WARD McCARTY
Address
Service Engineer Willy Steward

Date Sampled 7/25/86
Date Received 7/25/86
Date Reported 7/25/86
Field, Lse or Well Washout Pit
Submitted by Willy Steward

CHEMICAL ANALYSIS (Milligrams Per Liter)
Field, Lease, or Well

Chemical Component	Washout Pit				
Chloride (Cl^-)	700 ppm				
Sulfate ($SO_4^{=}$)					
Bicarbonate (HCO_3^-)					
Carbonate ($CO_3^{=}$)					
Calcium (Ca^{++})					
Magnesium (Mg^{++})					
Iron (Fe^{++} & Fe^{+++})					
Barium (Ba^{++})					
Specific Gravity					
pH ☐ Meter ☐ Strip ☐ Field					
Hydrogen Sulfide (H_2S)					
Carbon Dioxide (CO_2)					
Oxygen (O_2)					
Oil Carry-Over					

Other Description, Remarks and Recommendations

N.D. = Not Determined

Reported by Sherri Colvin
Sherri Colvin

OLDHAM PRINTING - LIBERTY, TEXAS 77575 - 409-336-5761

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INITIAL REVIEW DRAFT

Proposed Series
CLN:LCB
3/77

SPURGER SERIES

The Spurger series consists of deep, moderately well drained, slowly permeable soils on terraces. These nearly level to gently sloping soils formed in clayey and sandy alluvium of late Pleistocene Age. Slopes range from 0 to 5 percent.

Taxonomic Class: Fine, mixed, thermic Albaqualtic Hapludalfs

Typical Pedon: Spurger loam on smooth 1 percent slope in forest. (Colors are for moist soil unless otherwise stated.)

A1--0 to 5 inches; very dark grayish brown (10YR 3/2) loam; many coarse faint dark grayish brown (10YR 4/2) mottles; weak fine granular structure; slightly hard, very friable slightly sticky and slightly plastic; common fine and medium few coarse roots; very strongly acid; clear smooth boundary. (3 to 7 inches thick)

A2--5 to 9 inches; brown (10YR 5/3) loam; many coarse faint pale brown (10YR 6/3) and few medium faint dark grayish brown (10YR 4/2) mottles; weak fine granular structure; slightly hard, very friable; slightly sticky and slightly plastic; common fine and medium roots, few coarse roots; very strongly acid; clear smooth boundary. (3 to 10 inches thick)

B21t--9 to 25 inches; dark red (2.5YR 3/6) clay; few fine distinct strong brown (7.5YR -/6) and light brownish gray (10YR 6/2) mottles in lower part; moderate medium subangular blocky structure; very hard, very firm, sticky and plastic; few medium and coarse roots; thin patchy clay films on faces of peds; very strongly acid; gradual wavy boundary. (10 to 20 inches thick)

B22t--25 to 36 inches; red (2.5YR 4/6) clay; common medium distinct strong brown (7.5YR 5/6) and few medium distinct light brownish gray (10YR 6/2) mottles; moderate medium angular and subangular blocky structure; very hard, very firm, sticky and plastic; few medium and coarse roots; thin patchy clay films on faces of peds; very strongly acid; gradual smooth boundary. (10 to 15 inches thick)

B23t--36 to 43 inches; yellowish red (5YR 5/6) sandy clay loam, few fine distinct red (2.5YR 4/6) and common medium distinct light brownish gray (10YR 6/2) mottles; moderate medium subangular blocky structure; hard, very firm, sticky and plastic; thin patchy clay films on faces of peds; very strongly acid; gradual smooth boundary. (5 to 10 inches thick)

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Spurger Series

B3--43 to 65 inches; mottled yellowish red (5YR 5/8) and strong brown (7.5YR 5/6) sandy clay loam; few medium distinct light brownish gray (10YR 6/2) mottles; weak medium subangular blocky structure; slightly hard, friable; slightly sticky and slightly plastic; very strongly acid; gradual smooth boundary. (10 to 25 inches thick)

C--65 to 80 inches; brownish yellow (10YR 6/6) sand; few medium distinct mottles of strong brown (7.5YR 5/8); single grain, loose; very strongly acid.

Type Location: Newton County, Texas, from the intersection of U.S. Highway 96 and Farm Road 82 at Kirbyville, Texas, 5.7 miles east along Farm Road 82; 3.2 miles south along Texas Highway 87, 3.0 miles east and 0.4 mile south along county road, 100 feet west in forest.

Range in Characteristics: The solum ranges from 40 to 70 inches thick. The texture of the A horizons is loam or fine sandy loam and ranges from 6 to 17 inches thick with a reaction of strongly acid or very strongly acid. The A1 horizon has a hue of 10YR, values of 3 through 5, and chroma of 2 or 3. When values are less than 3.5, the thickness of the horizon is less than 7 inches. The A2 horizon has hues of 10YR, values of 4 through 6, and chromas of 2 through 4.

The B21t and B22t horizons have textures of clay or clay loam. The B23 horizon has texture of clay loam, sandy clay loam or loam. The Bt horizons have hues of 2.5YR, 5YR, and 7.5YR with values of 4 or 5, chromas of 6 through 8. Mottles with chroma of 2 or less occur in the upper 10 inches of the argillic horizon. Mottles in shades of gray, brown, yellow and red occur throughout the horizon. Some pedons have bleached sand and silt coatings or interfingering of A's material in the B23t. Reaction is strongly acid or very strongly acid.

The B3 and C horizons have hues of 7.5YR or 10YR, values 5 through 7, chromas 3 through 8. Mottles are in shades of gray. Textures are fine sandy loam, loamy fine sand or sand. Thin strata of clay loam and loam

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Spurger Series

Competing Series: These are the Arriola series in the same family and the Cadeville, Grubbs, McKamie, Mecklenburg, Rayburn, Sacul, Sedgefield and Tupelo series. Arriola soils have a paralithic contact with tuffaceous siltstone and sandstone at 20 to 40 inches. Cadeville, Grubbs and Tupelo soils all have base saturation greater than 60 percent. McKamie and Rayburn soils have vertic properties. In addition, McKamie soils are redder throughout and lack gray mottles in the upper part of the Bt horizon. Rayburn soils have montmorrillonitic minerology and have Cr horizons of weakly consolidated sandstone and siltstones. Mecklenburg soils lack gray mottles associated with wetness in the upper Bt horizons. Sacul soils have less than 35 percent base saturation and are on uplands. Sedgefield soils have yellow and brown argillic horizons, lack an abrupt textural change between the A and Bt horizon and have developed from saprolite.

Geographic Setting: Spurger soils are on broad, nearly level and gently sloping stream terraces. They formed in clayey and sandy alluvium from coastal plain sediments. Slope ranges from 0 to 5 percent. Mean annual rainfall ranges from 46 to 54 inches. Mean annual temperature ranges from 65 to 70 degrees F. and the Thornthwaite annual P-E indices exceed 64.

Geographically Associated Soils: These are the Bernaldo, Elysian, Gallime, Alaga, Mollville, and Bienville soils. Bernaldo, Elysian, Gallime and Bienville soils occur on about the same position as Spurger soils. Bernaldo and Gallime soils have fine-loamy control sections. Elysian soils have coarse loamy control sections. Bienville soils have argillic horizons that have textures of loamy fine sand or coarser. Alaga soils are on slightly higher positions and are sandy throughout their profiles.

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Spruger Series

Drainage and Permeability: Spurger soils are moderately well drained. Runoff is slow and permeability is slow.

Use and Vegetation: Used mainly for timber. Some areas are in pasture. Loblolly and shortleaf pine are dominant with many oak species and other southern hardwoods.

Distribution and Extent: Eastern Texas and Louisiana. The series is of minor extent.

Series Proposed: Newton County, Texas, 1977. Name is from a small community in Tyler County. Alternate name is Steinhagen.

Remarks: These soils were formerly classified in the red-yellow podzolic great soil group.

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SOIL INTERPRETATIONS RECORD

[illegible] 133 — TEXAS — RECORD NO. [illegible] — AUTHOR [illegible] — SOIL SERIES — SPURGER

SPURGER SERIES CONSISTS OF DEEP, MODERATELY WELL DRAINED, NEARLY LEVEL TO GENTLY SLOPING [illegible]. THE SOILS FORMED IN CLAYEY AND SANDY ALLUVIUM. IN A REPRESENTATIVE PROFILE, THE SURFACE LAYER IS LOAM ABOUT 9 INCHES THICK. [illegible] [illegible] MOTTLED YELLOWISH RED SANDY CLAY LOAM. [illegible]

ESTIMATED SOIL PROPERTIES

DEPTH (IN)	USDA TEXTURE	UNIFIED	AASHO	FRACT >3 IN (PCT)	PERCENT PASSING SIEVE NO. 4	10	40	200	LIQUID LIMIT	PLASTICITY INDEX
0-9	L, FSL	SM, ML, CL-ML, SM-SC	A-4	0	95-100	90-100	70-95	40-75	<20	NP-7
9-36	C, CL	CH, CL	A-7-6	0	95-100	95-100	90-100	70-95	45-70	20-40
36-65	SCL, CL, L	CL, SC, SM-SC, CL-ML	A-4, A-6	0	95-100	90-100	80-100	45-80	20-40	4-20
65-80	VAR									

DEPTH (IN)	CLAY (PCT OF <2MM)	MOIST BULK DENSITY	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (pH)	SALINITY	SHRINK-SWELL POTENTIAL	EROSION FACTORS K	T	WIND EROD. GROUP	ORGANIC MATTER (PCT)	CORROSIVITY STEEL	CONCRETE
SAME DEPTH AS ABOVE	8-18		0.6-2.0	0.11-0.20	4.5-5.5	—	LOW	.43	5	—	.5-2	HIGH	HIGH
	35-60		.06-0.2	0.14-0.11	4.5-5.5	—	MODERATE	.32					
	18-35		0.2-0.6	0.12-0.12	4.5-5.5	—	LOW	.32					

FLOODING FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE DEPTH (FT)	KIND	MONTHS	CEMENTED PAN DEPTH	HARDNESS	BEDROCK DEPTH (IN)	HARDNESS	SUBSIDENCE INITIAL	TOTAL	HYD GRP	POTENTIAL FROST ACTION
NONE			>6.0			—		>60		—		C	—

SANITARY FACILITIES

SEPTIC TANK ABSORPTION FIELDS	SEVERE - PERCS SLOWLY
SEWAGE LAGOONS	0-2%: SLIGHT 2-5%: MODERATE - SLOPE
SANITARY LANDFILL (TRENCH)	SEVERE - TOO CLAYEY
SANITARY LANDFILL (AREA)	SLIGHT
DAILY COVER FOR LANDFILL	POOR - TOO CLAYEY

BUILDING SITE DEVELOPMENT

SHALLOW EXCAVATIONS	SEVERE - TOO CLAYEY
DWELLINGS WITHOUT BASEMENTS	SEVERE - LOW STRENGTH
DWELLINGS WITH BASEMENTS	SEVERE - LOW STRENGTH
SMALL COMMERCIAL BUILDINGS	SEVERE - LOW STRENGTH
LOCAL ROADS AND STREETS	SEVERE - LOW STRENGTH
LAWNS, LANDSCAPING, AND GOLF FAIRWAYS	SLIGHT

CONSTRUCTION MATERIAL

ROADFILL	POOR - LOW STRENGTH
SAND	UNSUITED - EXCESS FINES
GRAVEL	UNSUITED - EXCESS FINES
TOPSOIL	FAIR - THIN LAYER

WATER MANAGEMENT

POND RESERVOIR AREA	SLIGHT
EMBANKMENTS DIKES AND LEVEES	MODERATE - HARD TO PACK
EXCAVATED PONDS AQUIFER FED	SEVERE - NO WATER
DRAINAGE	NOT NEEDED
IRRIGATION	PERCS SLOWLY, ERODES EASILY
TERRACES AND DIVERSIONS	PERCS SLOWLY, ERODES EASILY
GRASSED WATERWAYS	PERCS SLOWLY, ERODES EASILY

REGIONAL INTERPRETATIONS

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